



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Maria R. Nold
Regional Director

Federal Operating Permit Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, and Chapter 140 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9VAC5-80-50 through 9VAC5-80-300, and 9VAC5-140-10 through 9VAC5-140-900 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	International Paper - Franklin Mill
Facility Name:	International Paper - Franklin Mill
Facility Location:	34040 Union Camp Drive Franklin, Virginia 23851
Permit Number:	TRO-60214
AFS Number:	51-093-00006

This permit includes the following programs:

Federally Enforceable Requirements - Clean Air Act (Pages 4 through 72)

Federally Enforceable Requirements - CAIR (Page 73)

State Only Enforceable Requirements - (Page 73)

January 22, 2015

Effective Date

December 31, 2018

Expiration Date

Maria R. Nold

Signature Date

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I. Facility Information

Permittee

International Paper Franklin Virginia Mill
34040 Union Camp Drive
Franklin, VA 23851

Responsible Official

Charles Levell Hairston
Mill Manager

NO_x Budget Trading Authorized Account Representative

Howard Gray
Environmental Engineer

Facility Contact Person

Howard Gray
(757) 569-4535

AFS Identification Number: 51-093-00006

ORIS Code and/or EIA Facility ID: 52152

International Paper Operations Description:

NAICS 322110 - Pulp Mill (SIC 2611);

International Paper produces fluff pulp and turpentine from logs and wood chips using the Kraft pulping process. The mill has the capability of generating most of the power used at this mill.

There are 9 major parts of this fluff pulp operation as listed in the application: 1) the Wood Yard process area; 2) the Unbleached Pulp Mill process area; 3) the Caustic Recovery process area; 4) the Chemical Recovery process area; 5) the Bleach Plant process area; 6) the Pulp Machine process area; 7) the Power House process area; 8) the Wastewater Treatment System process area; and 9) Miscellaneous processes.

This plant is operating under a Federally Enforceable State Operating Permit (FESOP) dated March 31, 2006, amended on April 3, 2012, which includes the site-wide emissions cap conditions. The site-wide emission cap includes emissions from other companies operating equipment at the site. This permit is only for the International Paper operations.

This facility was granted a regulatory variance allowing DEQ to cap the emissions of 10 pollutants in 2005. The variance also waives the requirement for minor or major source permitting prior to construction projects at the facility. The site-specific regulation is codified at 9VAC5 Chapter 230. The facility and other companies operating onsite will continue to operate under the site-wide emission cap. International Paper is the facility that manages the emission cap and reports emissions for the facility, but this permit will only include the equipment and emission sources that are directly operated by International Paper.

II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity ¹	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled
Wood Yard Process Area						
WDY01	N/A	Traffic – Log Hauling (paved road)	75,000 mi./yr.	-	-	-
WDY02	N/A	Traffic – Chip Hauling (paved road)	50,000 mi./yr.	-	-	-
WDY06	N/A	Slashing Process	2,500,000 tons/yr	-	-	-
WDY08	N/A	Debarking/Chipping	2,500,000 tons/yr	-	-	-
WDY14	N/A	Wind Erosion – Bark Pile	N/A	-	-	-
WDY16	N/A	Screening/Rechipping	4,000,000 tons/yr	-	-	-
Unbleached Pulp Mill						
UPM02 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	K1 Digester Continuous Digester System	50 ADT/hr.	No. 6 Recovery Furnace or No. 4 Lime Kiln	CRE03, CAU03	TRS, VOC
		Kamyr Condensers from K1 digester	-			
UPM06 ⁽²⁾	CRESV03A, CRESV03B	D Wash Line	50 ADT/hr.	No. 6 Recovery Furnace	CRE03	TRS, VOC, HAPs
		D Seal (Filtrate) Tank				
		D Washer				
		D Decker Filtrate Tank				
		D Accepts Tank				
UPM07	UPMSV07	A Noss Screens	29.2 ADT/hr.	-	-	-
UPM08	UPMSV08	B Noss Screens	29.2 ADT/hr.	-	-	-
UPM13	CRESV03A, CRESV03B	E Decker	50 ADT/hr.	No. 6 Recovery Furnace	CRE03	TRS, VOC, HAPs
UPM14	UPMSV14	A Knotter	29.2 ADT/hr.	-	-	-
UPM15	UPMSV15	B Knotter	29.2 ADT/hr	-	-	-
UPM19 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	K1 Chip Bin	-	No. 6 Recovery Furnace or No. 4 Lime Kiln	CRE03, CAU03	TRS, VOC
		Kamyr Chip Bin Separator Condenser				
UPM20 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	Turpentine System	180 gal/hr	No. 6 Recovery Furnace or No. 4 Lime Kiln	CRE03, CAU03	TRS, VOC
		No.1 Storage Tank				
		Decanter				
		Decanter Underflow Tank				
		No.2 Storage Tank				
		Padding Water Collection Tank				
UPM21	UPMSV19	Vertical Foam Tank Not scheduled for immediate use, but if used will be part of HVLC collection system	8,760 hr/yr	No. 6 Recovery Furnace	CRE03	TRS, VOC, HAPs

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity ¹	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled
UPM26	-	D Wash HVLC System Venting	-	-	-	-
UPM28 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	D-Blow Tank	50 ADT/hr	No. 6 Recovery Furnace or No. 4 Lime Kiln	CRE03, CAU03,	TRS, VOC
UPM29	-	K1 Chip Bin LVHC System Venting	-	-	-	-
UPM30 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	Condensation Collection Tank	8,760 hr/yr	No. 6 Recovery Furnace or No. 4 Lime Kiln and the Condensate Stripper	CRE03, CAU03 CRE16	TRS, VOC
UPM31	-	Turpentine System Venting	-	-	-	-
Caustic Recovery Process Area						
CAU03 ⁽³⁾	CAUSV03	No. 4 Lime Kiln (1977)	15.0 tons CaO/hr	Variable throat venturi Scrubber	CAUCD03	PM/PM10/ PM2.5
	CAUSV03	No. 4 Lime Kiln (1977)	100 mmBtu/hr	-	-	-
CAU04	CAUSV04	No. 5 Slaker (1970) Not scheduled for immediate use	74.6 ADTP/hr	Fixed throat venturi Scrubber	CAUCD04	PM/PM10/ PM2.5
CAU05	CAUSV05	No. 6 Slaker (1970)	74.6 ADTP/hr	Fixed throat venturi Scrubber	CAUCD05	PM/PM10/ PM2.5
CAU06	CAUSV06	Green Liquor Handling	310,250 tons CaO/yr	-	-	-
	-	Green Liquor Surge Tank	-	-	-	-
	-	Green Liquor Spill Tank	-	-	-	-
	-	Green Liquor Clarifiers (2)	-	-	-	-
	-	No. 3 White Liquor Clarifier ** ** (used as "swing" clarifier. White or Green liquor)	-	-	-	-
	-	Green Liquor Standpipe	-	-	-	-
	-	Green Liquor Day Tank	-	-	-	-
	-	Green Liquor Coolers (4)	-	-	-	-
	-	Dregs Filter Mix Tanks	-	-	-	-
	-	Dregs Filter Hoods	-	-	-	-
	-	Dregs Filter Vacuum Pumps	-	-	-	-
	-	Dregs Filter Dump Tank	-	-	-	-
	-	Reserve Tanks (5), one reserve tank for green liquor, one reserve tank for white or green liquor, and three reserve tanks for black or white liquor	-	-	-	-
CAU07	CAUSV07	White Liquor Handling	310,250 tons CaO/yr	-	-	-
	-	Grits Mix Tank	-	-	-	-
	-	Grits Washers (2)	-	-	-	-
	-	Grits Washwater Return Standpipe	-	-	-	-
	-	Causticizers (8)	-	-	-	-
	-	Causticizer Standpipe	-	-	-	-
	-	White Liquor Clarifiers (4)	-	-	-	-

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity ¹	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled
CAU07 (cont)	-	White Liquor Standpipes (2)	-	-	-	-
	-	White Liquor Day Tank	-	-	-	-
	-	Reserve Tanks (5), one reserve tank for green liquor, one reserve tank for white or green liquor, and three reserve tanks for black or white liquor	-	-	-	-
CAU08	CAUSV08	Lime Mud Handling	310,250 tons CaO/yr	-	-	-
	-	Unwashed Mud Mix Tank	-	-	-	-
	-	Lime Mud Pressure Filter Feed Tanks (2)	-	-	-	-
	-	Lime Mud Pressure Filters (2)	-	-	-	-
	-	#7 Mud Washer	-	-	-	-
	-	Washed Mud Mix Tank	-	-	-	-
	-	Lime Mud Storage Tanks (4)	-	-	-	-
	-	Dewatering Aid Tank	-	-	-	-
	-	Disc Filter Vacuum Pump	-	-	-	-
CAU09	N/A	Lime Handling	310,250 tons CaO/yr	-	-	-
	-	Lime Collection Conveyor	-	-	-	-
	-	Lime Bucket Elevator	-	-	-	-
	-	Hot Lime Storage Bin	-	-	-	-
	-	Fresh Lime Storage Bin	-	-	-	-
	-	Purchased Lime Unloading Screw Conveyor	-	-	-	-
	-	Purchased Lime Transfer Conveyor	-	-	-	-
	-	Purchased Lime Bucket Elevator	-	-	-	-
CAU10	CAUSV10	Fillback Storage	310,250 tons CaO/yr	-	-	-
	-	Fillback Tank	-	-	-	-
	-	Fillback Standpipe	-	-	-	-
CAU13	N/A	No. 4 Lime Kiln Mud Disc Filter	15.0 tons CaO/hr	-	-	-
CAU14	CRESV03A, CRESV03B, CAUSV03	LVHC Collection System Drains and Tanks	-	No. 6 Recovery Furnace or No. 4 Lime Kiln and Condensate Stripper	CRE03, CAU03, CRE16	TRS, VOC HAPs
		4LK Chip Bin Foul Condensate Tank				
		4LK Foul Condensate Tank				
Chemical Recovery Process Area						
CRE03 ⁽³⁾	CRESV03A, CRESV03B	No. 6 Recovery Furnace (1977)	209,000 lb/hr BLS 935 MMBtu/hr natural gas	No. 6 RF ESP	CRECD03	PM/PM10/ PM2.5
		6 RF precipitator mix tank	-	-	-	-
		6 RF saltcake mix tank	-	-	-	-
CRE06 ⁽³⁾	CRESV06A, CRESV06B	No. 6 Rec. Smelt Dissolving Tank (1977)	209,000 lb/hr BLS	No 6 SDT Scrubbers	CRECD06A, CRECD06B	PM10/PM2.5

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity ¹	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled
CRE08 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	E Set Evaporators (1974)	1,600 gpm WBL	No. 6 Recovery Furnace or No. 4 Lime Kiln	CRE03, CAU03	TRS, VOC HAPs
CRE09 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	F Set Evaporators (1977)	450 gpm WBL 750 gpm IBL	No. 6 Recovery Furnace or No. 4 Lime Kiln	CRE03, CAU03	TRS, VOC HAPs
CRE10 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	G Set Evaporators (1986) 40 CFR Part 60, Subpart BB	744,500lb/hr evap	No. 6 Recovery Furnace or No. 4 Lime Kiln	CRE03, CAU03	TRS, VOC HAPs
CRE11	CRESV07	Weak Black Liquor Storage	8,760 hrs.	-	-	-
	-	#1 Weak Black Liquor Tank	-	-	-	-
	-	#2 Dump tank	-	-	-	-
	-	#2 Weak black liquor tank	-	-	-	-
	-	#3 Weak black liquor tank	-	-	-	-
	-	#1 Dump tank	-	-	-	-
CRE12	CRESV08	Intermediate Black Liquor Storage	8,760 hrs	-	-	-
	-	#1 Reserve tank	-	-	-	-
	-	#5 Reserve tank	-	-	-	-
	-	#6 Reserve tank	-	-	-	-
	-	#3 Heavy Black liquor tank	-	-	-	-
	-	#1 BLOX Tank	-	-	-	-
CRE13	CRESV09	Heavy Black Liquor Storage	8,760 hrs	-	-	-
	-	73% black liquor tank	-	-	-	-
CRE15	CRESV03A, CRESV03B, CAUSV03	Pulping Process Condensate Collection Tank & Stripper Feed Tank	8,760 hrs	No. 6 Recovery Furnace or No. 4 Lime Kiln	CRE03, CAU03	TRS, VOC
CRE16 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	Condensate Stripper System	1,140 gpm	No. 6 Recovery Furnace or No. 4 Lime Kiln	CRE03, CAU03	TRS, VOC
CRE16	-	Condensate Stripper Off Gas Venting	-	-	-	-
CRE18 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	LVHC Collection System Drains & Tanks	-	No. 6 Recovery Furnace or No. 4 Lime Kiln and Condensate Stripper	CRE03, CAU03CRE16	TRS, VOC HAPs
		Foul Condensate Tank #1				
		Foul Condensate Tank #2				
		Chip Bin Foul Condensate Tank				
		Kiln Foul Condensate Tank				
		6RB Foul Condensate Tank (LVHC)				

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity ¹	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled
CRE19 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	Stripper Off Gas System Drains & Tanks	-	No. 6 Recovery Furnace or No. 4 Lime Kiln and Condensate Stripper	CRE03, CAU03 CRE16	TRS, VOC HAPs
		#1 Gas Line Drain Pot				
		#2 Gas Line Drain Pot				
		Low Pressure TRS Gas Line Drain Pot				
		Methanol Condenser Storage Tank				
CRE20	-	Evaporators Venting	-	-	-	-
CRE21	-	BLOX Condenser Vent	-	-	-	-
CRE22 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	HVLC Gas Collection System - Condensate Drains & Tanks	-	No. 6 Recovery Furnace or No. 4 Lime Kiln and Condensate Stripper	CRE03, CAU03 CRE16	TRS, VOC HAPs
		F O ₂ / D Wash Foul Condensate Tank				
		BLOX Foul Condensate Tank				
		RB6 Foul Condensate Tank (HVLC)				
CRE23	-	Pulping Process Condensate Collection Tank & Stripper Feed Tank Venting	-	-	-	-
CRE24/ BLP13	-	HVLC Gas Collection System Venting at No. 6 Recovery Furnace	-	-	-	-
Bleach Plant Process Area						
BLP03 ⁽²⁾	BLPSV03	F Bleach Line	50 ODTP/hr	Scrubber	BLPCD03	Cl ₂ , HCl
		Washer Hoods	-			
		Post O ₂ Surge Tank	-			
		D Tower	-			
		D Tower Seal Tank	-			
		DO Tower	-			
		DO Tower Seal Tank	-			
		Oxygen Gas Cooler	-			
BLP05	CRESV03A, CRESV03B	F Bleach O₂ Delignification	50 ODTP/hr	No. 6 Recovery Furnace	CRE03	VOC, HAPs
		Pre-O ₂ Blend Chest	-			
		O ₂ Reactor	-			
		Pre-O ₂ Pressate Tank	-			
		O ₂ -1 Pressate Tank	-			
		O ₂ -2 Pressate Tank	-			
		O ₂ Blow Tank	-			
		Pre O ₂ O ₂ -1 and O ₂ -2 Presses	-			
		O ₂ Interstage Chest	-			

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity ¹	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled
BLP06	-	High Density Storage Tanks	8,760 hr/yr	-	-	-
	BLPSV06	#4 Hi density chest (Bleached)	-	-	-	-
	BLPSV06	#41 Hi density chest (Unbleached)	-	No. 6 Recovery Furnace	CRE03	VOC, HAPs
	BLPSV06	#43 Hi density chest (Bleached)	-	-	-	-
BLP07	-	High Density Stock Chests	8,760 hr/yr	-	-	-
	BLPSV07	#44 Hi density chest (Bleached)	-	-	-	-
BLP08	BLPSV08	SVP Plant	1.5 tons/hr	-	-	-
	-	Scrubber Vent Pipe	-	-	-	-
	-	ClO ₂ Generator Explosion Hatch Vent Pipe	-	-	-	-
	-	2 Chlorine Dioxide Storage Tanks	-	-	-	-
BLP09	BLPSV09	R3 Plant	1.67 tons/hr	-	-	-
	-	Scrubber Vent Pipe	-	-	-	-
	-	ClO ₂ Generator Explosion Hatch Vent Pipe	-	-	-	-
BLP11	-	F Oxygen Delignification HVLC Gas System Venting	-	-	-	-
BLP13	-	HVLC Gas Collection System Venting at No. 6 Recovery Furnace	-	-	-	-
BLP14 ⁽²⁾	CRESV03A, CRESV03B, CAUSV03	Bleach Plant HVLC Condensate Collection System Tanks	-	No. 6 Recovery Furnace or No. 4 Lime Kiln and Condensate Stripper	CRE03, CAU03, CRE16	Methanol, VOC and HAPs
		D-Wash Condensate Tank				
		Combined Condensate Tank				
BLP015	-	Methanol (MeOH) Tank (2009) (NSPS Kb)	19,000 gallons	-	-	-
Pulp Machine Process Area						
PRM04	PRMSV04	No. 4 Fluff Pulp Machine	45.0 tons/hr	-	-	-
	-	Fourdrinier vents (2)	-	-	-	-
PRM11	PRMSV11	Bleached Stock LD Storage	8,760 hr/yr	-	-	-
Power House Process Area						
PWR05	PWRSV03	No. 9 Power Boiler with duct burner (1997) (NOx Budget Unit ID 029) (NSPS GG)	893 MMBTU/hr	Oxidation Catalyst/SCR	PWRCD04/05	CO, VOC/ NO _x
PWR12	-	LVHC System Venting	-	-	-	-
Wastewater Treatment System						
WWT01	WWTSV01	Primary Clarification/Sludge Handling	93 million gal/day	-	-	-
WWT02	-	Aerated Stabilization Basin	93 million gal/day	-	-	-
WWT03	-	C Pond	11 billion gallons (total volume)	-	-	-

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity ¹	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled
Miscellaneous Process Area						
MIS01	-	Paved Roads	-	-	-	-
MIS02	-	Unpaved roads	-	-	-	-
MIS03	-	Refrigeration systems	-	-	-	-
MIS10	-	Miscellaneous Liquid Storage Tank (NSPS Kb - Depending on content of tank)	900,000 gallon	-	-	-
MIS11 ⁽⁴⁾	-	Emergency Generator - Main Gate – Caterpillar 3054, (2000) (MACT ZZZZ)	100 HP / 60 KW	-	-	-
MIS12 ⁽⁴⁾	-	Emergency Generator – Main Office - Caterpillar 3054 (2000) (MACT ZZZZ)	100 HP / 60 KW	-	-	-
MIS13 ⁽⁴⁾	-	Emergency Generator – High-ground Storm-water Pump, Caterpillar, (2000) (MACT ZZZZ)	75 HP	-	-	-
MIS14 ⁽⁴⁾	-	Non-Emergency Backup Pump 4 LK Turning Gear – Hatz 3M41Z (2006) (NSPS IIII) (MACT ZZZZ)	22.5 HP	-	-	-
MIS15 ⁽⁴⁾	-	WTP Fire Water Pump – Detroit (2000) (MACT ZZZZ)	170 HP	-	-	-
MIS16 ⁽⁴⁾	-	Back Gate Fire Water Pump 2 – Detroit (2000) (MACT ZZZZ)	170 HP	-	-	-
MIS17 ⁽⁴⁾	-	FRP Fire Water Pump – Caterpillar (2000) (MACT ZZZZ)	270 HP	-	-	-
MIS18 ⁽⁴⁾	-	FRP-910 Fire Water Pump – Caterpillar 3208, (2000) (MACT ZZZZ)	270 HP	-	-	-
MIS19 ⁽⁴⁾	-	Back Gate Fire Water Pump #1 - (MACT ZZZZ)	170 HP	-	-	-

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

(1) The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

(2) Units are subject to the MACT Subpart S - 40 CFR Part 63, Subpart S

(3) Units are subject to the MACT Subpart MM - 40 CFR Part 63, Subpart MM

(4) Units are subject to the MACT Subpart ZZZZ - 40 CFR Part 63, Subpart ZZZZ

III. Definitions

"ADTP" means Air Dried Tons of Pulp.

"BLS" means Black Liquor Solids.

"CAM" means Compliance Assurance Monitoring per 40 CFR Part 64.

"CaO" means quick lime.

"CEMS" means Continuous Emission Monitoring System.

"CFR" means Code of Federal Regulations.

"CMS" means Continuous Monitoring System.

"CO" means Carbon Monoxide.

"COMS" means Continuous Opacity Monitoring System

"CPMS" means Continuous Parameter Monitoring System.

"Department" means the Department of Environmental Quality, an agency of the Commonwealth described in § 10.1-1183 of the Code of Virginia.

"Emission Caps" means the site-wide limitations on the rate of emissions of an air pollutant established and identified as emission caps in 9VAC5-230-40 A. This limitation on the annual emissions of a pollutant, expressed in tons per year, is derived from emissions factors and site-specific quantification methods believed to be accurate at the time of original establishment of the emission caps. Emissions attributed to the emission caps shall include fugitive emissions to the extent quantifiable, and emissions resulting from startup, shutdown and malfunction conditions.

"EPA" means the United States Environmental Protection Agency.

"Facility" and "Site" and "Franklin Paper Mill" mean the Kraft paper mill located on the contiguous property at 34040 Union Camp Drive, Franklin, Virginia, under common control by International Paper and its successors in ownership.

"FESOP" means Federally Enforceable State Operating Permit.

"Force Majeure" is defined as an event that cannot be reasonably anticipated or controlled, such as a natural disaster, hurricane, earthquake, flood, war or other such occurrences. Circumstances must be abnormal and unforeseeable, so that the consequences could not have been avoided through the exercise of all due diligence.

"HAP" means Hazardous Air Pollutant.

"H₂SO₄" means Sulfuric Acid Mist.

"HVLC" means High Volume Low Concentration.

"IBL" means Intermediate Black Liquor

"International Paper" refers to International Paper Company, a New York corporation authorized to conduct business in Virginia and the owner and operator of a plant (the Franklin Paper Mill), located at 34040 Union Camp Drive, in Franklin, Virginia.

"LD" means Low Density.

"LVHC" means Low Volume High Concentration. The points of collection are listed in Appendix A.

"MACT" means Maximum Achievable Control Technology – all MACTS are in 40 CFR Part 63.

"Major new source review (major NSR) program" means a program for the preconstruction review and permitting of new major stationary sources or major modifications (physical changes or changes in the method of operation) which are subject to review in accordance with Article 8 (9VAC5-80-1605 et seq.) or Article 9 (9VAC5-80-2000 et seq.) of Part II of 9VAC5 Chapter 80.

"MeOH" means Methanol.

"Minor new source review (minor NSR) program" means a program for the preconstruction review and permitting of new stationary sources or modifications (physical changes or changes in the method of operation) which are subject to review in accordance with Article 6 (9VAC5-80-1100 et seq.) of Part II of 9VAC5 Chapter 80 and which do not qualify as new major stationary sources or major modifications under the major NSR program.

"Modification" means the definition of modification in the applicable new source review program, provided the emissions unit or process is not subject to a NESHAP.

"New source review (NSR) program" means a program for the preconstruction review and permitting of new stationary sources or modifications (physical changes or changes in the method of operation) which are subject to review in accordance with Article 6 (9VAC5-80-1100 et seq.), Article 8 (9VAC5-80-1605 et seq.) or Article 9 (9VAC5-80-2000 et seq.) of Part II of 9VAC5 Chapter 80.

"NESHAP" means a reference to the National Emission Standards for Hazardous Air Pollutants as codified in 40 CFR Part 61 or Part 63.

"NO_x" means Nitrogen Oxide compounds.

"NSPS" means New Source Performance Standards – 40 CFR Part 60.

"ODTP" means Oven Dried Tons of Pulp.

"Physical or operational change" means any physical or operational change at the 'affected facility' that involves the addition of a new emissions unit.

"PM" means Particulate Matter.

"PM₁₀" means Particulate Matter less than 10 microns.

"ppmv" means parts per million by volume.

"Project" means any physical change or change in the method of operation of a process or emissions unit (not including an increase in throughput), including replacement thereof, which would require a change to the emission quantification methodologies described in Sections XIV, XV, or XVI of the FESOP permit.

"QIP" means Quality Improvement Plan as described in 40 CFR 64.8

"RICE" means Reciprocating Internal Combustion Engines.

"SAPCB" means State Air Pollution Control Board.

"SAPCB Regulations" means 9VAC5 Chapters 10 through 80.

"Site" and "Facility" and "Franklin Paper Mill" mean the Kraft paper mill located on the contiguous property at 34040 Union Camp Drive, Franklin, Virginia, under common control by International Paper and its successors in ownership.

"Site Tenant" means a commercial entity authorized by International Paper to operate one or more emission units or activities on the Franklin Paper Mill Site.

"SO₂" means Sulfur Dioxide.

"SSM" means Startup, Shutdown, and Malfunction.

"The Board" refers to the SAPCB.

"TRO" means the Tidewater Regional Office of the Department of Environmental Quality.

"TRS" means Total Reduced Sulfur.

"VOC" means Volatile Organic Compounds as defined in 9VAC5-10-20 of Virginia SAPCB regulations.

"Variance" means the 9VAC5 Chapter 230 of Virginia SAPCB regulations.

"WBL" means Weak Black Liquor

"Wood" means cellulosic material used as raw material for the pulping process, shredded or chipped tree trunks or branches.

IV. Facility-Wide Requirements

A. Site-Wide Emission Caps

1. Site Wide Emission Caps

Pollutant	PM	PM ₁₀	SO ₂	NO _x	CO	VOC	TRS	Lead	H ₂ SO ₄	Fluorides
tons/yr	1166	804	7890	3000	2568	694	223	0.135	100	20.4

(9VAC5-230-40 C and Condition III.A of the 4/3/12 FESOP)

B. Future Adjustments to the Emission Caps

2. **Future Regulations** – If International Paper becomes subject to future regulations, emissions credits obtained from the associated emissions reductions may not be used to comply with the emission caps. The emission caps will be adjusted to account for any such applicable requirements to which International Paper has become subject. In the interim, International Paper shall submit to the Department a description of how it plans to comply with such new regulation(s) and what the associated emission change(s) will be for the pollutants specified in Paragraph A. The information submitted shall specify the emission units affected and any changes in emissions that will result from complying with the regulation(s).

(9VAC5-230-40D and Condition III.B of the 4/3/12 FESOP)

C. Operating under the Emission Caps

3. **Operation of control devices** - International Paper shall continue to operate the emission control equipment listed in this permit, as amended from time to time, in accordance with the SAPCB and federal regulations. The equipment shall be operated in accordance with good air pollution control practices at all times. Nothing in the permit shall act to deprive International Paper of any defenses it may have in an enforcement action or to require compliance with emission standards when not otherwise required (such as during periods of startup, shutdown and malfunction).

(9VAC5-230-70 and Condition III.C.1 of the 4/3/12 FESOP)

4. **Prohibition on Emissions Trading** - International Paper may not engage in any emissions trading beyond that allowed under a program approved by the SAPCB. No emissions credits obtained from emissions reductions external to the affected facility may be used to comply with the emission caps.

(9VAC5-230-60B and Condition III.C.2 of the 4/3/12 FESOP)

D. Compliance with State and Federal Regulations and Air Permits

5. **Compliance with Regulations** - The FESOP permit allows International Paper or any Site Tenant to construct and operate new emission units or modify and operate existing emission units at the site. Any construction, reconstruction or modification activities shall be deemed to satisfy all requirements of the major and minor new source review program for the pollutants specified in Condition.A.1 provided that no exceedances of any emission caps occur. Exceedance of any emission cap or other provisions of this permit, whether caused directly by the actions or omissions of International Paper or those of a site tenant may subject International Paper to permitting requirements, enforcement and/or permit revocation.

(9VAC5-230-50B and Condition IV of the 4/3/12 FESOP)

a. Major NSR Permitting and Registration

- i. Compliance with the FESOP permit shall be deemed to satisfy all requirements of the major new source review program for the pollutants listed in Condition.A.1 of this section.

A. For any physical or operational change (as defined in Section III) that would otherwise be subject to the major NSR program, International Paper shall submit a control technology application to and shall obtain approval thereof from the Department that the control technology to be installed meets the applicable requirements of Article 4 (9VAC5-50-240 et seq.) of Part II of 9VAC5 Chapter 50. International Paper shall install emission controls that are consistent with the approval. International Paper may begin and complete actual construction of the physical or operational change prior to receiving approval from the Department if each of the following conditions is met:

1. International Paper has submitted an approvable control technology application for the physical or operational change with a notice of intent to begin actual construction of the physical or operational change.
2. International Paper has submitted a certification that it:
 - a. Freely assumes all financial and other risks associated with beginning actual construction of the physical or operational change prior to receiving the control technology approval, and;
 - b. Acknowledges that the Department, in evaluating the application, may not consider any consequences to the applicant of beginning actual construction prior to receiving the control technology approval.
3. The Department has not, within 30 days of receipt of the application, issued a written notice to International Paper, based on concerns about air quality impacts or emissions control technology, requiring the termination of construction as soon as practicable but no later than five business days after receipt of the notice.
4. International Paper constructs the physical or operational change as described in the control technology application.
5. International Paper does not commence operation of the physical or operational change until the control technology approval has been granted.

B. If the Department has not, within 60 days of receipt of the control technology application submitted in accordance with paragraph 0 of this section, issued a written notice to International Paper either approving or objecting to the construction of the physical or operational change, the control technology application may be deemed granted.

(9VAC5-230-50D and Condition IV.A of the 4/3/12 FESOP)

b. Minor NSR permitting

- i. Compliance with this permit shall be deemed to satisfy all requirements of minor NSR program for all pollutants listed in Condition.A.1 of this section.
- ii. Except for pollutants specified in Condition.A.1 of this section, compliance with this permit does not relieve International Paper from obligations to comply with requirements addressing emissions of hazardous air pollutants under Articles 4 (9VAC5-60-200 et seq.) and 5 (9VAC5-60-300 et seq.) of 9VAC5 Chapter 60.

(9VAC5-230-50C and Condition IV.B of the 4/3/12 FESOP)

c. Other Regulations Encompassed

- i. New Source Performance Standards (NSPS) for Stationary Sources: International Paper is subject to various NSPS regulations and shall comply with all the requirements of each NSPS regulation. If International Paper becomes subject to a regulation listed in 40 CFR Part 60, after the effective date of the permit, the facility shall comply with all requirements under that regulation.

(9VAC5-230-60A and Condition IV.C.1 of the 4/3/12 FESOP)

- ii. National Emission Standards for Hazardous Air Pollutants: International Paper is subject to various NESHAP regulations and shall comply with all the requirements of each NESHAP. If any International Paper becomes subject to a regulation listed in 40 CFR Part 61 or Part 63, after the effective date of the permit, the facility shall comply with all requirements under that regulation. (9VAC5-230-50B, 9VAC5-230-60A and Condition IV.C.2 of the 4/3/12 FESOP)
- iii. International Paper shall remain in compliance with all other SAPCB Regulations. Compliance with the FESOP shall constitute compliance with Article 4 of 9VAC5 Chapter 50 and Article 6, Article 8 and Article 9 of 9VAC5 Chapter 80. (9VAC5-230-50B, 9VAC5-230-60A and Condition IV.C.3 of the 4/3/12 FESOP)
- iv. Compliance with the terms and conditions of this permit shall not relieve International Paper of its obligation to comply with applicable local, State or Federal laws and regulations not addressed in this section. (9VAC5-230-60A and Condition IV.C.4 of the 4/3/12 FESOP)

E. Federally Enforceable State Operating Permit

6. Periodic Review and Amendment of the FESOP

- a. The FESOP may be periodically reviewed and amended as specified in this section.
 - i. This FESOP may be reviewed and amended as outlined in 9VAC5-230-80 or 9VAC5-230-120.
 - ii. The Department reserves the right to amend the permit as appropriate to assure compliance with any of the applicable requirements.
 - iii. In accordance with 9VAC5-230-80, the following amendments to the FESOP permit may be accomplished using an administrative amendment:
 - A. Revisions to the FESOP to incorporate descriptions or other information relative to physical or operational changes (as defined in Section III) that have occurred at the facility following adoption of the variance.
 - B. Revisions to emissions quantification methods described in Sections IX, X or XI of the FESOP used to demonstrate compliance with the emission caps per Condition F.8 of this permit.

(9VAC5-230-80 and Condition V of the 4/3/12 FESOP)

7. Termination of the FESOP Permit

- a. The FESOP permit may be revoked or terminated as provided below upon written notice for any of the following reasons:
- b. If the EPA or the Department determines that continuation of the permit presents an imminent and substantial endangerment to the public health or welfare, or the environment.
- c. If the permit causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard.
- d. If International Paper knowingly makes material misstatements, including, but not limited to, falsifying emissions data.
- e. If International Paper neglects or refuses to comply with:
 - i. Any condition of this permit; or
 - ii. Any applicable requirements.
- f. For any other reasons not specified here for which the Department has statutory authority to terminate the permit.

(9VAC5-230-110 and Condition VI of the 4/3/12 FESOP)

F. Compliance Determination

International Paper shall demonstrate compliance with the emission caps as follows:

8. **Compliance Determination** - Compliance shall be demonstrated on a rolling 12-month basis for each pollutant. Actual emissions for each calendar month shall be calculated by the last working day of the month following the close of the month. A 12-month total shall be calculated each month for each pollutant by adding the total emissions for the most recent month to the totals for the preceding 11 months.
9. **Compliance Determination** - Actual emissions from existing processes (those whose emissions were included in determining the emission caps) shall be determined using the methodology used in establishing the emission caps except where the Department has approved alternative emissions quantification methods.
10. **Compliance Determination** - Actual emissions from any physical or operational changes (those not in existence on the effective date of the variance) shall be calculated using methodology approved by the Department.
11. **Compliance Determination** - Due to an inconsistency between the MACT Phase 2 downtime allowance of 4% for the No.6 Recovery Furnace (CRE03) and the way the emission caps were derived, when quantifying the VOC and TRS emissions for emission cap compliance purposes, emissions from the HVLC collection system vents can be excluded from the total emissions if the venting time is less than the 4% of the system operating time.

(9VAC5-230-80 and Condition IV.D of the 4/3/12 FESOP)

G. Monitoring

12. **Site-Wide Monitoring** - International Paper shall monitor throughputs, hours of operation, venting minutes and other parameters as necessary to determine actual emissions to demonstrate compliance with the emission caps. Monitoring to show compliance with the emission caps in this permit or other SAPCB regulations shall be carried out as specified in the applicable regulations, the FESOP permit, in this permit, or as agreed to by the Department.
13. **CEMS/COMS Quality Control Program** - A CEMS/COMS quality control program, which includes a written Quality Assurance/Quality Control (QA/QC) Plan, and which meets the requirements of 40 CFR 60.13 and Part 60 Appendices B and F shall be implemented for all continuous emissions and opacity monitoring systems unless otherwise specified in the QA/QC Plan. Relative Accuracy Test Audits (RATAs) and Cylinder Gas Audits (CGAs) shall be carried out in conformance with the appropriate schedules as defined by the QA/QC Plan. The facility shall obtain approval of the QA/QC Plan from the Department.
14. **Calculating Emissions** - Actual emissions of emission cap pollutants from the facility shall be calculated as described in Conditions F.8, F.9 and F.10 of this section. Records shall be kept for five years and shall be available for inspection.
15. **Air Pollution Control Equipment Monitoring** - Each air pollution control device shall be equipped with some means of continuously monitoring the device to determine that it is operating in an efficient manner. Monitoring shall be carried out as specified in the applicable regulations, the FESOP permit, this permit or as agreed to by the Department.

(9VAC5-230-80 and Condition VII.D.1 of the 4/3/12 FESOP)

H. Maintenance/Operating Procedures

16. **Maintenance and Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:
 - a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
 - b. Maintain an inventory of spare parts.

- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
 - d. Train operators in the proper operation of all such equipment prior to such operation and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.
- Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to Department personnel upon request.
(9VAC5-80-110 and Condition VII.D.2 of the 4/3/12 FESOP)

I. Testing

- 17. **Performance Testing** - Future performance testing shall be conducted in a manner consistent with acceptable Department procedures and methods. The details of the tests and reports are to be arranged in advance with the Department. International Paper shall submit to the Department an approvable test protocol at least 30 days prior to testing. A copy of the test results shall be submitted to the Department within 60 days after test completion and shall conform to a format acceptable to the Department.
- 18. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is free from cyclonic flow. Test ports shall be provided when requested at the appropriate locations.
- 19. **Testing** - The Department reserves the right to require site-specific testing at any time to verify compliance with information submitted by International Paper.
- 20. **Test Methods** - If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.
(9VAC5-80-490E and Condition VII.D.3 of the 4/3/12 FESOP)

J. Notifications

- 21. **Force Majeure Notifications** - Force Majeure events shall not cause termination of the FESOP permit providing that International Paper complies with the following notification requirements:
 - a. Within four calendar days after it becomes aware of an event which International Paper believes constitutes a Force Majeure International Paper shall notify the Department in writing of the anticipated consequences of such event with respect to the terms and conditions of this permit and the anticipated time and methods to resolve such consequences.
- 22. **Exceedance Notification** - Within 10 calendar days of becoming aware of any exceedance of any emission cap International Paper shall notify the Department in writing of the exceedance.
(9VAC5-80-490E and Condition VII.D.4 of the 4/3/12 FESOP)

K. Recordkeeping

- 23. **Recordkeeping** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit and the FESOP permit. The content and format of such records shall be arranged with the Department. These records shall include, but are not limited to:
 - a. International Paper shall keep records of fuel and process throughputs, emissions and other parameters as necessary to determine actual emissions to demonstrate compliance with the emission caps. Records shall be kept for five years and shall be available for inspection.
 - b. International Paper shall keep CMS records for No. 4 Lime Kiln (TRS and O₂), the No. 6 Recovery Furnace (opacity, TRS and O₂), and the No. 9 Power Boiler (NO_x and CO). (This does not include one minute data.)

- c. International Paper shall keep records of:
 - i. Initial and continuous compliance testing.
 - ii. CMS data, calibrations and calibration checks, percent operating time, and excess emissions.
 - iii. Results of all stack tests, visible emission evaluations and performance evaluations.
 - iv. Scheduled and unscheduled maintenance and operator training of air pollution control equipment, monitoring devices, and process equipment which affect emissions.
- d. Records shall be available for inspection and shall be kept for five years.
(9VAC5-80-490E and Condition VII.D.5 of the 4/3/12 FESOP)

L. Reporting

24. **Semi-Annual and Quarterly Reports** - Excess Emissions and CMS Performance Reports for MACT Requirements - The permittee shall submit reports to the Department, within 30 days after the end of each semi-annual or quarterly period. Each semi-annual or quarterly report shall include the following:
- a. The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;
 - b. The date and time identifying each period during which the CMS was out of control, as defined in 40 CFR 63.8(c)(7) of 40 CFR Part 63, Subpart A;
 - c. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in 40 CFR Part 63, Subpart S, that occurs during startups, shutdowns, and malfunctions of the affected source;
 - d. The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standards, that occurs during periods other than startups, shut-downs, and malfunctions of the affected source;
 - e. The nature and cause of any malfunction (if known);
 - f. The corrective action taken or preventive measures adopted;
 - g. The nature of the repairs or adjustments to the CMS that was inoperative or out of control; and
 - h. The total process operating time during the reporting period.
 - i. One copy of the semi-annual or quarterly report shall be submitted to the U.S. Environmental Protection Agency at the address below:
Associate Director
Office of Air Enforcement (3AP10)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029
25. **Reports for CMS** – No. 4 Lime Kiln, No. 6 Recovery Furnace and No. 9 Power Boiler - The permittee shall furnish written reports to the Department of excess emissions on a quarterly basis, postmarked no later than the 30th day following the end of the calendar quarter. These reports shall address TRS emissions from the No. 4 Lime Kiln, and the No. 6 Recovery Furnace, opacity from the No. 6 Recovery Furnace, and NO_x and CO emissions from the No. 9 Power Boiler. The reports shall include, but are not limited to the following information:
- a. The magnitude of excess emissions, any conversion factors used in the calculation of excess emissions, and the date and time of commencement and completion of each period of excess emissions;

- b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the process, the nature and cause of the malfunction (if known), the corrective action taken or preventative measures adopted;
 - c. The date and time identifying each period during which the continuous monitoring systems were inoperative except for zero and span checks and the nature of the system repairs or adjustments;
 - d. When no excess emissions have occurred or the CMS have not been inoperative, repaired or adjusted, such information shall be stated in that report;
 - e. The number of valid hours for each TRS/oxygen, opacity, NO_x, and/or CO CEMS during the quarter, and;
 - f. The number of operating hours for each monitored process or unit during the quarter.
26. **Annual Reports** - International Paper shall include the following with the Title V annual emissions statement:
- a. For projects (as defined in Section III) completed at the mill during the reporting period:
 - i. A brief description of each project explaining what changes were made and any impacts the change may have on air pollution emissions, and
 - ii. If a change in an emission factor is being submitted with the emissions statement, justification shall be submitted with the statement. This justification may include emission testing from before and after the project completion to prove change the in emission factor.
 - b. International Paper shall submit a summary of the monthly and rolling 12-month totals of all emission cap pollutants for the reporting period.
(9VAC5 80-100, 9VAC5-230-50 F, 9VAC5-230-80 and Condition VII.D.6 of the 4/3/12 FESOP)
27. **GHG Reporting** - International Paper shall comply with the GHG Reporting Rule in accordance with 40 CFR 98 Subpart AA.
(9VAC5 80-100)

V. Unbleached Pulp Mill Process Area

The emission units associated with this section of the permit are the following:

Unit ID	Emission Unit Description	Unit ID	Emission Unit Description
UPM02	K1 Digester Operation	UPM20	Turpentine System Operation
	Kamyr Condensers from K1 digester		No.1 Storage Tank
UPM06	D Wash Line		Decanter
	D Seal (Filtrate) Tank		Decanter Underflow Tank
	D Washer		No.2 Storage Tank
	D Decker Filtrate Tank		Padding Water Collection Tank
	D Accepts Tank	UPM21	Vertical Foam Tank (Not scheduled for immediate use)
UPM07	A Noss Screens	UPM26	D Wash HVLC System Venting
UPM08	B Noss Screens	UPM28	D Blow Tank
UPM13	E Decker	UPM29	K1 Chip Bin LVHC System Venting
UPM14	A Knotter	UPM30	Condensate Collection Tank
UPM15	B Knotter	UPM31	Turpentine System Venting
UPM19	K1 Chip Bin		
	Kamyr Chip Bin Separator Condenser		

A. Limitations

28. **Digester System TRS Standard** - No owner or operator shall cause or permit to be discharged into the atmosphere from any digester system (UPM02) any TRS in excess of 5 ppm by volume on a dry basis, corrected to 10% oxygen.
(9 VAC 5-80-110 and 9 VAC 5-40-1690)
29. **Collection and Treatment of LVHC Gases** - The LVHC gases from the digester (UPM02), turpentine systems (UPM20) and BOD tank (UPM30) shall be collected by the LVHC collection system and routed to the No. 6 Recovery Furnace (CRE03) or the No. 4 Lime Kiln (CAU03) for destruction.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
30. **Control of HAP Emissions** - To comply with 40 CFR 63.443(a)(1) the facility shall control the HAP emissions from the following equipment systems in this process area:
 - a. Each LVHC system; (See Appendix B for list of units.)
 - b. Each knotter or screen system (UPM07-8 and UPM14-15) with total HAP mass emission rates greater than or equal to the rates specified in 40 CFR 63.443(a)(1)(ii)(A) or (a)(1)(ii)(B) or the combined rate specified in 40 CFR 63.443(a)(ii)(C);
 - c. Each pulp washing system; and
 - d. Each decker system that uses any process water other than fresh water or paper machine whitewater, or uses any process water with a total HAP concentration greater than 400 parts per million by weight.

The collection of HVLC system gases shall include the gases from the units listed in b-d above (see Appendix A).

Note:

Emissions from the mill's knotter and screen systems are not required to be collected and controlled. These systems have been found to have HAP concentrations below the thresholds specified in 40 CFR 63.443(a)(1)(ii).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
31. **Collection and Treatment of HVLC Gases** - The HVLC system gases from this process area shall be collected by a closed vent system and routed in accordance with 40 CFR 63.443(d)(4) to the No. 6 Recovery Furnace (CRE03) for destruction.
(9 VAC 5-80-110 and 9 VAC 5-60-100)

32. **Collection of Pulping Process Condensates** - The pulping process condensates shall be collected (as specified in Condition 33) from the following equipment: the digester system (UPM02), each turpentine recovery system (UPM20), each evaporator system (CRE08, 09 & 10); each LVHC collection system (see Appendix B) and each HVLC collection system (see Appendix A).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
33. **Pulping Process Condensate Collection Amount** - One of the following combinations of HAP-containing process condensates generated, produced, or associated with the equipment systems listed Condition 32 shall be subject to the requirements of Conditions 34 **Error! Reference source not found.** and VII.A.113.
 - a. All pulping process condensates from the equipment systems specified in Condition 32.
 - b. The combined pulping process condensates from each LVHC collection system and each HVLC collection system, plus pulping process condensate streams that in total contain at least 65 percent of the total HAP mass (as MeOH) from the digester system (UPM02), the turpentine recovery system (UPM20), and each evaporator system (CRE08, 09 & 10), expressed as a 15 day rolling average, or
 - c. The pulping process condensates from the equipment systems specified in Condition 32 that in total contain a total HAP mass of at least 11.1 lbs of total HAP (as MeOH) per ODTP, expressed as a 15 day rolling average.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
34. **Conveyance of Pulping Process Condensates** - The pulping process condensates shall be conveyed in a closed collection system which meets the individual drain system requirements specified in 63.960, 63.961 and 63.962 of 40 CFR Part 63, Subpart RR except for closed vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443(d) and 63.450, instead of in accordance with 40 CFR 63.693 as specified in 40 CFR 63.962(a)(3)(ii), (b)(3)(ii)(A), and (b)(5)(iii).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
35. **Pulping Process Condensates Collection System** - The condensate collection tank (UPM30) shall have fixed roofs and all openings shall be designed and operated with no detectable leaks as indicated by an instrument reading of <500 ppm VOC (40 CFR 60, Appendix A, Method 21) above background and vented into a closed-vent system meeting the requirements of 40 CFR 63.450 and routed to a control device that meets the requirements in 40 CFR 63.443(d). Each opening shall be maintained in a closed, sealed position at all times that a tank contains pulping condensates or HAPs except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
36. **Requirements for Enclosures** - Each enclosure shall maintain negative pressure at each enclosure or hood opening. Each enclosure or hood opening closed during the initial performance test specified in 40 CFR 63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance or repairs.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
37. **Requirements for Positive Pressure Components** - Each component of the closed-vent system used to comply with 40 CFR 63.443(c), 63.444(b), and 63.445(b) that is operated at a positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500ppmv above background as measured by the procedures specified in 40 CFR 63.457(d).
(9 VAC 5-80-110 and 9 VAC 5-60-100)

38. **40 CFR Part 63, Subpart S** - Except where this permit is more restrictive than the applicable requirement the facility shall be operated in compliance with the requirements of 40 CFR Part 63, Subpart S. (9 VAC 5-80-110, 9 VAC 5-60-90 and 9 VAC 5-60-100)
39. **Excess Emissions** - Periods of excess emissions reported under 40 CFR 63.455 shall not be a violation of 40 CFR 63.443(c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: (40 CFR 63.443(e))
- a. One percent for control devices used to reduce the total HAP emissions from the LVHC system; and
 - b. Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and
 - c. Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.
- (9 VAC 5-80-110 and 40 CFR 63.443(e))

B. Monitoring

40. **LVHC Collection System Monitoring** - The LVHC Collection System shall be equipped with devices to continuously monitor the status of all rupture disks, pressure vacuum breakers (pvp), or other venting systems. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the LVHC Collection System is operating. (9 VAC 5-80-110 and 9 VAC 5-60-100)
41. **LVHC Collection System Monitoring** - The computer system used to continuously monitor each vent shall be equipped with an alarm to alert the operator when a release has occurred. (9 VAC 5-80-110)
42. **Operations Monitoring** - The permittee shall monitor the control equipment downtime, the process operating times and the venting minutes from the LVHC and HVLC collection systems. (9VAC5-80-100)
43. **Pulping Process Condensates Collection Monitoring** - To demonstrate compliance with Condition A.33.a, the permittee shall ensure that any bypass valves on the condensate collection system required in Condition A.34 are closed.
- a. To demonstrate compliance with MACT compliance method requirement of 65% collection of all HAPs (as MeOH) produced per Condition A.33.a, the permittee shall monitor/calculate, on a daily basis, the HAP (as MeOH) mass from the digester system, turpentine system, and evaporator system and the HAP (as MeOH) mass of the collected streams which will be sent to the condensate (steam) stripper for treatment. The daily monitoring shall be generated from flows, mass balance, and the once per permit term HAP (as MeOH) testing. The daily HAP (as MeOH) mass shall be averaged over a 15-day period to determine a 15-day rolling average of the percent of HAP (as MeOH) collected.
 - b. To demonstrate compliance with the MACT compliance method requirement to collect at least 11.1 lbs of total HAP (as MeOH) produced per ODTP per Condition V.A.33.c, the permittee shall determine on a daily basis the total HAP mass (as MeOH) collected from the digester system, the turpentine system, evaporator systems, and the LVHC and HVLC collection systems being sent to the condensate (steam) stripper for treatment. The daily determination shall be made using the daily average combined flow rate to the condensate (steam) stripper feed tank, and the representative average total HAP (as MeOH) concentration in this condensate as determined using Condition D.60. The daily HAP mass (as MeOH) collected shall be averaged over a 15-day period to determine a 15-day rolling average of the amount of HAP (as MeOH) collected.
- (9 VAC 5-80-110 and 9 VAC 5-60-100)

44. **Enclosures and Closed Vent Systems Inspections** - Except as described in Condition 48, each enclosure and closed vent system used to comply with Subpart S shall have a visual inspection conducted once during each calendar month, with at least 21 days elapsed time between inspections, to ensure each opening is maintained in the closed position and sealed. The permittee shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment. The inspection shall include the ductwork, piping, enclosures, and connections to covers for visible evidence of defects. An inspection log shall be kept containing the information specified in 40 CFR 63.454(b).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
45. **Negative Pressure Demonstrations** - Except as described in Condition 48, each enclosure and closed-vent system shall demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in 63.457(e) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
46. **Positive Pressure Leak Demonstrations** - Except as described in Condition 48, each positive pressure closed-vent system shall demonstrate initially and annually no detectable leaks as specified in 63.450(c) of 40 CFR Part 63, Subpart S measured by procedures in 63.457(d) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
47. **Closed Collection System Inspections** - Except as described in Condition 48, each pulping process condensate closed collection system shall be visually inspected once during each calendar month, with at least 21 days elapsed time between inspections. Recordkeeping requirements shall meet 63.454 of 40 CFR Part 63, Subpart S. Each collection tank shall be operated with no detectable leaks as specified in 63.446(d)(2)(i) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
48. **Inspection Frequency for Inherently Unsafe or Inaccessible Components** – Each enclosure, fixed roof cover, or component of the pulping process closed-vent and condensate collection systems that is identified in the mill's site-specific LDAR Plan as being in a location that is inherently unsafe or inaccessible is exempt from monthly or annual inspections, monitoring and repair requirements. Such enclosures, covers, and components are to be inspected, monitored, and repaired as described in the LDAR Plan
49. **Condensate Collection Tank Leak Inspection** - Each condensate collection tank (UPM30) shall be operated with no detectable leaks as specified in 63.446(d)(2)(i) of 40 CFR Part 63, Subpart S measured initially and annually by the procedures in 63.457(d) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)

50. **LVHC Collection System Monitoring (CAM)** - The permittee shall monitor, operate, calibrate and maintain the LVHC Collection System to collect the gases from the digester, evaporators, condensate (steam) stripper, turpentine system and the chip bin according to the following:

Emission Unit	LVHC Collection System Vents Emission Units: UPM02, UPM19, UPM20 Emission Points: CRESV03A & B and CAUSV03 Control Devices: CRE03 and CAU03	
Description	Digester, evaporator, condensate (steam) stripper, turpentine system and chip bin	
Control Device	No. 6 Recovery Furnace and No. 4 Lime Kiln	
Applicable Requirement	9 VAC 5-40-1690	
Regulated Pollutant	TRS	
Emission Limit	5 ppm @ 10% O ₂	
I. CAM Indicator	Routing process gases to Recovery Furnace or Lime Kiln for incineration, limiting process venting as required by 40 CFR Part 63 (MACT), Subpart S.	
Measurement Approach	Vent monitoring systems	
Monitoring Frequency	Continuous monitoring of LVHC Collection System emergency bypass vents	
Justification	No direct temperature monitoring of the Recovery Furnace and Lime Kiln is required for TRS incineration per VADEQ 4/11/95 letter. This determination was made based on the revisions to 40 CFR Part 60 (NSPS) Subpart BB which deleted the requirement to monitor combustion temperature.	
II. Indicator Range	Process venting to be less than 1% as required by MACT Subpart S.	
III. Performance Criteria		
Data	Detector Location	Located at each emergency bypass vent in the LVHC Collection System
	Sensor specs	The various vents have various methods of monitoring. (i.e., pressure vacuum breakers, temperature, rupture disks)
	Acquisition Procedure	PI System
	Data Recording System	Proficy Data Collection / Reporting System
QA/QC Practices and Criteria		Per MACT QA/QC plan
Data Collection Procedures		Proficy data collection system
Averaging Period		Semi-Annual

(9 VAC 5-80-110 E and 40 CFR 64)

51. **CAM** - The permittee shall conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.
(9 VAC 5-80-110 E and 40 CFR 64.6 (c))
52. **Monitoring Equipment Maintenance (CAM)** - At all times, the permittee shall maintain the monitoring equipment, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment, except as specified in the QA/QC Plan for equipment that is subject to an extended temporary shutdown.
(9 VAC 5-80-110 E and 40 CFR 64.7 (b))
53. **Monitoring System Operation (CAM)** - Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the LVHC Collection System is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of compliance assurance monitoring, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by inadequate maintenance or improper operation are not malfunctions.
(9 VAC 5-80-110 E and 40 CFR 64.7 (c))

54. **Response to Excursions and Exceedances (CAM)** - Upon detecting an excursion or exceedance, the permittee shall restore operation of the LVHC Collection System (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup and shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator, designated condition, or below the applicable emission limitation or standard, as applicable. (9 VAC 5-80-110 E and 40 CFR 64.7 (d)(1))
55. **Response to Excursions and Exceedances (CAM)** - Determination that acceptable procedures were used in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. (9 VAC 5-80-110 E and 40 CFR 64.7(d)(2))
56. **Notifications (CAM)** - If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Department and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (9 VAC 5-80-110 E and 40 CFR 64.7(e))
57. **QIP Requirements (CAM)** - If the accumulation of exceedances or excursions exceeds 5% duration of the operating time for the LVHC Collection System for a semiannual reporting period, the permittee shall develop, implement and maintain a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. If a QIP is required, the permittee shall have it available for inspection. The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following, as appropriate:
- a. Improved preventative maintenance practices;
 - b. Process operation changes;
 - c. Appropriate improvements to control methods;
 - d. Other steps appropriate to correct control performance; and
 - e. More frequent or improved monitoring.
- (9 VAC 5-80-110 E and 40 CFR 64.8(a) and (b))

C. Recordkeeping and Reporting

58. **Records** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Department. These records shall include, but are not limited to:
- Number of minutes each venting system vents from the LVHC Collection System to the atmosphere and all TRS release event minute records.
 - Daily monitoring of the percent, or alternatively the amount, of HAP (as MeOH) collected and 15-day rolling average (This is only necessary when compliance is based on either the 65% collection of all HAPs produced requirement or the 11.1 lb HAPs produced per ODTP requirement).
 - Daily amount of HAPs (as MeOH) sent to the condensate (steam) stripper or daily amount of HAPs condensed from the condensate (steam) stripper vapor stream and sent to the No. 4 Lime Kiln for combustion. (This is only necessary when compliance is based on the 10.2 pounds per Oven Dried Ton of Pulp (ODTP) limit).
 - Daily amount of ODTP processed. (This is only necessary when condensate collection compliance is based on the 11.1 lbs per ODTP requirement or when condensate treatment compliance is based on the 10.2 pounds per ODTP limit).
 - Daily amount of HAPs (as MeOH) removed by condensate (steam) stripper or daily amount of HAPs (as MeOH) condensed from the vapor discharged from the condensate (steam) stripper and sent to the No. 4 Lime Kiln for combustion. (This is only necessary when compliance is based on the 10.2 pounds per ODTP limit).
 - Monthly visual observation logs of the LVHC, HVLC and the condensate closed collection systems including the information specified in 40 CFR 63.454(b) (see Appendices A & B).
 - Annual monitoring of the condensate collection tank, condensate closed collection system, and closed-vent systems.
 - Operating times of process equipment, control equipment downtime and occurrences of excess emissions.
 - Continuous monitoring system calibrations and equipment checks, percent operating time, and resultant excess emissions.
 - Operation and control device monitoring records for the condensate collection system and the LVHC collection system.
 - Scheduled and unscheduled maintenance and operator training of air pollution control equipment, monitoring devices, and process equipment which affect emissions.
 - Initial and continuing compliance testing.

These records shall be available at the facility for inspection by the Department and shall be current for the most recent 5 years.

(9 VAC 5-80-110)

59. **Semi-Annual Reports** - The permittee shall submit excess emission and continuous monitoring system reports for the LVHC system, the HVLC system and the condensate collection system to the Department, within 30 days after the end of each semi-annual period. Each semi-annual report shall include the following:
- The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;
 - The date and time identifying each period during which the CMS was out of control, as defined in 63.8(c)(7) of 40 CFR Part 63, Subpart A;

- c. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in 40 CFR Part 63, Subpart S, that occurs during startups, shutdowns, and malfunctions of the affected source;
- d. The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standards, that occurs during periods other than startups, shut-downs, and malfunctions of the affected source;
- e. The nature and cause of any malfunction (if known);
- f. The corrective action taken or preventive measures adopted;
- g. The nature of the repairs or adjustments to the CMS that was inoperative or out of control; and
- h. The total process operating time during the reporting period.
- i. One copy of the semi-annual report shall be submitted to the U.S. Environmental Protection Agency at the address below:
Associate Director
Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029
(9 VAC 5-80-110, 9 VAC 5-170-160 and 9 VAC 5-50-50)

D. Testing

60. Pulping Process Condensate Collection Amount Compliance Testing –

- a. To demonstrate compliance with the 65% collection of all HAPs (as MeOH) produced, the permittee shall perform testing for the HAP (as MeOH) mass from the streams named in Condition A.32 and the HAP (as MeOH) mass of the collected streams which shall be sent to the condensate (steam) stripper for treatment. The daily HAP (as MeOH) mass shall be averaged over a 15-day period to determine a 15-day rolling average of the percent of HAP (as MeOH).
- b. Alternatively, to demonstrate compliance with the 11.1 lbs per Oven Dried Ton of Pulp condensate collection requirement, the permittee shall perform testing to determine the representative average total HAP (as MeOH) concentration in the combined stream to the condensate (steam) stripper feed tank. The testing shall be conducted in a manner suitable to establish a 15-day average total HAP (as MeOH) concentration.

The testing shall be performed once per permit term.
(9 VAC 5-80-110)

VI. Caustic Recovery Process Area

The emission units associated with this section of the permit are the following:

Unit ID	Emission Unit Description	Unit ID	Emission Unit Description
CAU03	No. 4 Lime Kiln		Lime Mud Handling
CAU04	No. 5 Slaker (Not scheduled for immediate use)		Unwashed Mud Mix Tank
CAU05	No. 6 Slaker		Lime Mud Pressure Filter Feed Tanks (2)
CAU06	Green Liquor Handling	CAU08	Lime Mud Pressure Filters (2)
	Green Liquor Surge Tank		#7 Mud Washer
	Green Liquor Spill Tank		Washed Mud Mix Tank
	Green Liquor Clarifiers (2)		Lime Mud Storage Tanks (4)
	No. 3 Liquor Clarifier (WL or GL)		Dewatering Aid Tank
	Green Liquor Standpipe		Disc Filter Vacuum Pump
	Green Liquor Day Tank	CAU09	Lime Handling
	Green Liquor Coolers (4)		Lime Collection Conveyor
	Dregs Filter Mix Tank		Lime Bucket Elevator
	Dregs Filter Hood		Hot Lime Storage Bin
	Dregs Filter Vacuum Pump		Fresh Lime Storage Bin
	Dregs Filter Dump Tank		Purchased Lime Unloading Screw Conveyor
	Reserve Tanks (5) (see Section II)		Purchased Lime Transfer Conveyor
			Purchased Lime Bucket Elevator
CAU07	White Liquor Handling	CAU10	Fillback Storage
	Grits Mix Tank		Fillback Tank
	Grits Washers (2)		Fillback Standpipe
	Grits Washwater Return Standpipe	CAU13	No. 4 Lime Kiln Mud Disc Filter
	Causticizers (8)	CAU14	LVHC Collection System Drains and Tanks
	Causticizer Standpipe		4LK Chip Bin Foul Condensate Tank
	White Liquor Clarifiers (4)		4LK Foul Condensate Tank
	White Liquor Standpipes (2)		
	White Liquor Day Tank		
	Reserve Tanks (5) (see Section II)		

A. Limitations

61. **Lime Kiln Emission Controls** - Particulate Matter emissions from the Lime Kiln (CAU03) shall be controlled by a Venturi Scrubber. The Venturi Scrubber shall be provided with adequate access for inspection and shall be in operation when the Lime Kiln is operating.
(9 VAC 5-80-110, 9 VAC 5-230-50F and Condition VII.A.1.a of the 4/3/12 FESOP)
62. **Lime Kiln PM Emissions Limit** - The permittee must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere from the Lime Kiln (CAU03) is less than or equal to the PM emission limits established under 40 CFR 63.862(a)(1)(i) and (ii) of Subpart MM.
(9 VAC 5-80-110 and 40 CFR 63.862(a))
63. **Lime Kiln PM Emissions Limits** – The PM emission limit for the Lime Kiln shall be established as specified in 40 CFR 63.862(a)(1)(i) and (ii) using the methods in 40 CFR 83.865(a)(1) and (2). The limit must be reestablished if either of the following actions occurs:
 - a. The air pollution control system for any existing Lime Kiln is modified (as defined in 40 CFR 63.861) or replaced;
 - b. Any Lime Kiln for which an emission limit was established is shut down for more than 60 consecutive days.

The limit shall be approved by the Department. The permittee shall show compliance with the established limits as defined in 40 CFR 63.865(b).
(9 VAC 5-80-110 and 40 CFR 63.862(a)(1)(i) and (ii))

64. **Corrective Action** - Corrective action shall be implemented for the Lime Kiln (CAU03) if any 3-hour average parameter value is outside the range of values established during the initial performance test in 40 CFR 63.864(j). The unit shall be considered in violation when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values (non SSM events) established in 40 CFR 63.864(j).
(9 VAC 5-80-110, 40 CFR 63.862(a)(1)(ii) and 40 CFR 63.864(j) & (k))
65. **Lime Kiln PM Emission Standard** - No owner or operator of the Lime Kiln (CAU03) shall cause or permit to be discharged into the atmosphere any particulate matter emissions in excess of 1.00 lb/ADTP.
(9 VAC 5-80-110 and 9 VAC 5-40-1680)
66. **Slaker PM Emission Standard** - No owner or operator of any Slaker Tank Units (CAU04 and 05) shall cause or permit to be discharged into the atmosphere any particulate matter emissions in excess of 0.30 lb/ADTP.
(9 VAC 5-80-110 and 9 VAC 5-40-1680)
67. **Lime Kiln TRS Emission Standard** - No owner or operator of the Lime Kiln (CAU03) shall cause or permit to be discharged into the atmosphere any TRS emissions in excess of 20 ppm by volume on a dry basis corrected to 10% O₂ averaged on a 24-hour average basis.
(9 VAC 5-80-110, 9 VAC 5-40-1690 and Condition VII.A.1.b of the 4/3/12 FESOP)
68. **Collection of Pulping Process Condensates** - Pulping process condensates shall be collected from the 4LK Foul Condensate Tank (CAU14) whenever LVHC gases are being sent to the No. 4 Lime Kiln (CAU03) for combustion. Pulping process condensates shall be collected from the 4LK Chip Bin Foul Condensate Tank (CAU14) whenever LVHC gases are being sent to the No. 4 Lime Kiln (CAU03) for combustion and flash steam is being utilized on the K1 Chip Bin (UPM19).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
69. **Conveyance of Pulping Process Condensates** - The pulping process condensates shall be conveyed in a closed collection system which meets the individual drain system requirements specified in 63.960, 63.961 and 63.962 of 40 CFR Part 63, Subpart RR except for closed vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443(d) and 63.450, instead of in accordance with 40 CFR 63.693 as specified in 40 CFR 63.962(a)(3)(ii), (b)(3)(ii)(A), and (b)(5)(iii).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
70. **Pulping Process Condensates Collection System** - The condensate collection tanks (CAU14) shall have fixed roofs and all openings shall be designed and operated with no detectable leaks as indicated by an instrument reading of <500 ppm VOC (40 CFR 60, Appendix A, Method 21) above background and vented into a closed-vent system meeting the requirements of 40 CFR 63.450 and routed to a control device that meets the requirements in 40 CFR 63.443(d). Each opening shall be maintained in a closed, sealed position at all times that a tank contains pulping process condensates or HAPs except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
71. **Treatment of Pulping Process Condensates** - The pulping process condensates shall be treated by the condensate (steam) stripper (CRE16). The treatment of the condensates by the condensate (steam) stripper shall reduce the total HAPs by either ≥92% by weight or remove 10.2 pounds per ODTP. Each HAP removed from the pulping process condensate streams during treatment and handling by the condensate (steam) stripper shall be enclosed and vented into a closed vent system (the LVHC collection system) and routed to the No. 6 Recovery Furnace (CRE03) or No. 4 Lime Kiln (CAU03) for destruction. The enclosures and closed vent systems shall meet the requirements of 63.443(d)(4) and 63.450 of 40 CFR Part 63, Subpart S. Methanol and other liquids condensed from the vapor discharged from the condensate (steam) stripper shall be routed to the No. 4 Lime Kiln (CAU03) for combustion.
(9 VAC 5-80-110 and 9 VAC 5-60-100)

72. **Requirements for Enclosures** - Each enclosure shall maintain negative pressure at each enclosure or hood opening. Each enclosure or hood opening closed during the initial performance test specified in 40 CFR 63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance or repairs.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
73. **Requirements for Positive Pressure Components** - Each component of the closed-vent system used to comply with 40 CFR 63.443(c), 63.444(b), and 63.445(b) that is operated at a positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500ppmv above background as measured by the procedures specified in 40 CFR 63.457(d).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
74. **Minimization of Emissions** - At all times, including periods of startup, shutdown and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions.
(9 VAC 5-80-110 and 9 VAC 5-40-20E)

B. Monitoring

75. **Lime Kiln Scrubber CPMS** - The Venturi Scrubber for the Lime Kiln (CAU03) shall be equipped with a Continuous Parameter Monitoring System (CPMS). The CPMS shall include a device to continuously measure: the differential pressure drop across the scrubber and the scrubber liquid flow rate. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The CPMS shall track the parameter values on a 3-hour rolling average. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the Lime Kiln is operating.

The permittee is considered in violation of Condition A.62 of this section when six or more 3-hour average parameter values within any 6-month period are outside the range of values established in the performance test. See Condition A.64 of this section.

The permittee must implement corrective action as specified in the startup, shutdown and malfunction plan prepared in accordance with 40 CFR 63.866(a) whenever the 3-hour average of the lime kiln scrubber CPMS parameter is outside its established operating range (from performance testing), excluding average CPMS values outside the established operating range caused by startup, shutdown and malfunction.
(9 VAC 5-80-110, 40 CFR 63.864(k)(1)(ii) & (k)(2)(iii) and Condition VII.A.2.a of the 4/3/12 FESOP)

76. **Lime Kiln CEMS - TRS** - A Continuous Emission Monitoring System shall be installed to measure and record the emissions of TRS from the Lime Kiln stack as ppmvd. A CEMS shall be installed to measure and record the percentage oxygen in the stack gases of the Lime Kiln. Except where otherwise indicated in this condition, both CEMS shall be installed, calibrated, maintained, audited and operated in accordance with requirements of the Department's approved procedures which are equivalent to the requirements of 40 CFR 60.13 and 40 CFR Part 60, Appendix F. The CEMS shall be audited in conformance with the appropriate schedules as defined by the CEMS QA/QC Plan required to be prepared per Condition IV.G.13. The SPAN VALUE for the TRS monitor shall be established by using historical data and approved by the Department. Data from each monitoring system shall be reduced to 24-hour block averages per calendar day by calculating the arithmetic mean of the appropriate 24 contiguous valid 1-hour averages. Using the corresponding 24-hour block TRS and oxygen averages, calculate a TRS concentration as ppmvd corrected to 10% oxygen, using the equation in 9 VAC 5-40-1780 B.3. Valid TRS/oxygen data shall be obtained for no less than 75% of the operating hours of each quarter. Section 4 of 40 CFR 60 Appendix F shall be the basis for determining valid data. A 24-hour block average shall be considered valid if at least 50% of the operating hours in the 24-hour period are valid data hours.
(9 VAC 5-80-110 and Condition VII.A.2.b of the 4/3/12 FESOP)

77. **Lime Kiln Scrubber CPMS Operating Range** - The permittee shall have established operating ranges for each Lime Kiln Scrubber CPMS in accordance with 40 CFR 63.864(j).
(9 VAC 5-80-110 and 40 CFR 63.864(j))
78. **Lime Kiln Scrubber Monitoring (CAM)** - The permittee shall monitor, operate, calibrate and maintain the venturi scrubber controlling the Lime Kiln (CAU 03) according to the following:

Emission Unit		No. 4 Lime Kiln	
Description		15.0 ton/hr CaO Lime Kiln	
Control Device		Venturi Scrubber	
Applicable Requirement		9 VAC 5-40-1680 and 40 CFR 63.862(a)(1)(i) and (ii)	
Regulated Pollutant		Particulate Matter	
Emission Limits		1.00 lb/ADTP MACT*limit	
I. CAM Indicator		Scrubber pressure differential and scrubber liquid flow rate	
Measurement Approach		Continuous parameter monitoring system, as currently required by MACT*	
Monitoring frequency (each Kiln)		At least once every 15-minute period using procedures in 40 CFR 63.8(c). Four 15-minute averages comprise the one-hour averages and three one-hour averages comprise the three-hour rolling average	
Justification		Differential pressure and scrubbing liquid flow rate are the appropriate control device performance indicators to monitor in accordance with the MACT* requirements for chemical recovery system process units using a wet scrubber for particulate matter control	
II. Indicator Range		Scrubber pressure differential 22.0 psig minimum pressure drop (3-hr rolling average)	Scrubber liquid flow rate 810.0 gpm, minimum flow rate to scrubber (3-hr rolling average)
		These indicators were established during the most recent performance test for the MACT*	
III. Performance Criteria			
Data Representativeness	Detector Location	Sample lines at gas inlet and gas outlet of scrubber feed	Liquid flow sensor in liquid recirculation line
	Sensor Specs		
	(a) Range	0 to 40 in W.G.	0 to 2000 gpm
	(b) Accuracy	± 0.15% of span	±0.25% of transmitter range
	Acquisition Procedure	1-hour data are combined to create 3-hour rolling average	
	Data Recording system	PI data historian	
QA/QC Practices and Criteria		Per the MACT* QA/QC Plan	
Data Collection Procedures		Proficiency data collection system and PI data historian	
Averaging Period		3-hr rolling	

*MACT refers to 40 CFR Part 63 Subpart MM (or referred to as the Combustion MACT)

(9 VAC 5-80-110 and 40 CFR 64)

79. **Slaker Scrubber Monitoring (CAM)** - The permittee shall monitor, operate, calibrate and maintain the Venturi scrubbers controlling the Slakers (CAU04 & 05) according to the following:

Emission Unit		No. 5 Slaker (CAU04) Not scheduled for immediate use		No. 6 Slaker (CAU05)	
Description		Lime Slaker		Lime Slaker	
Control Device		Inverted Venturi Scrubber		Inverted Venturi Scrubber	
Applicable Requirement		9 VAC 5-40-1680		9 VAC 5-40-1680	
Regulated Pollutant		Particulate Matter		Particulate Matter	
Emission Limit		0.3 lb/ADTP		0.3 lb/ADTP	
I. CAM Indicator		Scrubber fan motor amps and scrubber liquid flow rate		Scrubber fan motor amps and scrubber liquid flow rate	
Measurement Approach		Continuous parameter monitoring system		Continuous parameter monitoring system	
Monitoring frequency (each slaker)		At least once every 15-minute period. Four 15-minute averages comprise the one-hour averages and three one-hour averages comprise the three-hour rolling average			
Justification		The measurement parameters, approach, and frequency are similar to those required for the MACT* sources			
II. Indicator Range		Scrubber Fan Amps (3-hr rolling average)	Scrubber Liquid Flow Rate (3-hr rolling average)	Scrubber Fan Amps (3-hr rolling average)	Scrubber Liquid Flow Rate (3-hr rolling average)
III. Performance Criteria					
Data Representativeness	Detector Location	At Scrubber Fan Motor	Liquid flow sensor in liquid recirculation line	At Scrubber Fan Motor	Liquid flow sensor in liquid recirculation line
	Sensor Specs				
	(a) Range	0-100 amps	0-400 gpm	0-100 amps	0-400 gpm
	(b) Accuracy	± 0.5%	±0.25% of reading	± 0.5%	±0.25% of reading
	Acquisition Procedure	1-hour data are combined to create 3-hour rolling average	1-hour data are combined to create 3-hour rolling average	1-hour data are combined to create 3- hour rolling average	1-hour data are combined to create 3-hour rolling average
	Data Recording system	PI data historian		PI data historian	
QA/QC Practices and Criteria		QA/QC per manufacturer's standard			
Data Collection Procedures		Proficy data collection system and PI data historian			
Averaging Period		3-hour rolling average			

*MACT refers to 40 CFR Part 63 Subpart MM (or referred to as the Combustion MACT)

(9 VAC 5-80-110 and 40 CFR 64)

80. **CAM** - The permittee shall conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.

(9 VAC 5-80-110E and 40 CFR 64.6(c))

81. **Monitoring System Operation (CAM)** - Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the Lime Kiln and Slakers are operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of compliance assurance monitoring, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by inadequate maintenance or improper operation are not malfunctions.

(9 VAC 5-80-110E and 40 CFR 64.7(c))

82. **Monitoring Equipment Maintenance (CAM)** - At all times, the permittee shall maintain the monitoring equipment, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment, except as specified in the QA/QC Plan for equipment that is subject to an extended temporary shutdown.
(9 VAC 5-80-110E and 40 CFR 64.7(b))
83. **Response to Excursions and Exceedances (CAM)** - Upon detecting an excursion or exceedance, the permittee shall restore operation of the Lime Kiln or the affected Slaker (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup and shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator, designated condition, or below the applicable emission limitation or standard, as applicable.
(9 VAC 5-80-110E and 40 CFR 64.7(d)(1))
84. **Response to Excursions and Exceedances (CAM)** - Determination that acceptable procedures were used in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
(9 VAC 5-80-110E and 40 CFR 64.7(d)(2))
85. **Notifications (CAM)** - If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Department and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
(9 VAC 5-80-110E and 40 CFR 64.7(e))
86. **QIP Requirements (CAM)** - If the accumulation of exceedances or excursions exceeds 5% duration of the operating time for the Lime Kiln or Slakers for a semiannual reporting period, the permittee shall develop, implement and maintain a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. If a QIP is required, the permittee shall have it available for inspection. The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following, as appropriate:
- a. Improved preventative maintenance practices;
 - b. Process operation changes;
 - c. Appropriate improvements to control methods;
 - d. Other steps appropriate to correct control performance; and
 - e. More frequent or improved monitoring.
- (9 VAC 5-80-110E and 40 CFR 64.8(a) and (b))

87. **Enclosures and Closed-Vent System Inspections** - Except as described in Condition 91, each enclosure and closed vent system used to comply with Subpart S shall have a visual inspection conducted once during each calendar month, with at least 21 days elapsed time between inspections, to ensure each opening is maintained in the closed position and sealed. The permittee shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment. The inspection shall include the ductwork, piping, enclosures, and connections to covers for visible evidence of defects. An inspection log shall be kept containing the information specified in 40 CFR 63.454(b).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
88. **Negative Pressure Demonstrations** - Except as described in Condition 91, each enclosure and closed-vent system shall demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in 63.457(e) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
89. **Positive Pressure Leak Demonstrations** - Except as described in Condition 91, each positive pressure closed-vent system shall demonstrate initially and annually no detectable leaks as specified in 63.450(c) of 40 CFR Part 63, Subpart S measured by procedures in 63.457(d) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
90. **Closed Collection System Inspections** – Except as described in Condition 91, each pulping process condensate closed collection system shall be visually inspected once during each calendar month, with at least 21 days elapsed time between inspections. Recordkeeping requirements shall meet 63.454 of 40 CFR Part 63, Subpart S. Each collection tank shall be operated with no detectable leaks as specified in 63.446(d)(2)(i) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
91. **Inspection Frequency for Inherently Unsafe or Inaccessible Components** – Each enclosure, fixed roof cover, or component of the pulping process closed-vent and condensate collection systems that is identified in the mill's site-specific LDAR Plan as being in a location that is inherently unsafe or inaccessible is exempt from monthly or annual inspections, monitoring and repair requirements. Such enclosures, covers, and components are to be inspected, monitored, and repaired as described in the LDAR Plan.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
92. **Condensate Collection Tank Leak Inspections** - Each condensate collection tank (CAU14) shall be operated with no detectable leaks as specified in 63.446(d)(2)(i) of 40 CFR Part 63, Subpart S measured initially and annually by the procedures in 63.457(d) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
93. **Pulping Process Condensate Collection System Monitoring** - To demonstrate compliance with Condition VI.A.8, the permittee shall ensure that any bypass valves on the condensate collection system required in Condition VI.A.9 are closed.
(9 VAC 5-80-110 and 9 VAC 5-60-100)

C. Recordkeeping and Reporting

94. **Recordkeeping** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Department. These records shall include, but are not limited to:
- The production rate of CaO in tons/day for the Lime Kiln.
 - Daily operating periods for the Lime Kiln to show compliance with 9 VAC 5-40-1770C.
 - CPMS parameter monitoring data for the Lime Kiln scrubber including any period when the operating parameter levels were inconsistent with the level established during the initial performance test, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken.

- d. Records and documentation of supporting calculations for compliance determinations with 40 CFR 63.865(a)-(e).
- e. Records of monitoring parameter ranges established for the Lime Kiln scrubber in accordance with 40 CFR 63.864(j) and 63.867(b).
- f. Daily 24-hour average TRS concentrations, 24-hour average oxygen concentrations, and the corrected TRS concentrations for the Lime Kiln in accordance with 9 VAC 5-40-1780B.
- g. TRS CEMS records from the Lime Kiln. (This does not include one-minute data.).
- h. Continuous monitoring system (TRS CEMS) calibrations and calibration checks, percent operating time, and excess emissions.
- i. Scheduled and unscheduled maintenance and operator training of the Lime Kiln and associated pollution control equipment.
- j. Records of stack test data.
- k. Annual monitoring of the condensate closed collection system and closed-vent systems.
- l. Records of visual evaluations, visible emissions evaluations and any corrective action taken.
- m. The permittee must maintain records of any occurrence when corrective action is required under 40 CFR 63.864(k)(1)(ii), and when a violation is noted under 40 CFR 63.864(k)(2)(i) or (iii).
- n. Maintenance and training records

These records shall be available at the facility for inspection by the Department and shall be current for the most recent 5 years.

(9 VAC 5-80-110, 40 CFR 63.866 and Condition VII.A.3 of the 4/3/12 FESOP)

95. **Reporting** - The permittee shall furnish written reports to the Department of excess emissions from any process monitored by a continuous monitoring system (CEMS) (TRS monitoring for the Lime Kiln) on a quarterly basis, postmarked no later than the 30th day following the end of the calendar quarter. These reports shall include, but are not limited to the following information:
- a. The magnitude of excess emissions, any conversion factors used in the calculation of excess emissions, and the date and time of commencement and completion of each period of excess emissions.
 - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the process, the nature and cause of the malfunction (if known), the corrective action taken or preventative measures adopted.
 - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in that report.
 - e. The number of valid hours for the TRS/oxygen continuous emission monitoring system during the quarter.
 - f. The number of operating hours for the Lime Kiln during the quarter.
- (9 VAC 5-80-110)

96. **Excess Emission Reports** - The permittee shall furnish written excess emission reports to the Department for the CPMS on the Lime Kiln scrubber.
- a. The owner or operator must report quarterly if measured parameters meet any of the conditions specified in 40 CFR 63.864(k)(1) or (2) of Subpart MM. This report must contain the information specified in 40 CFR 63.10(c) of as well as the number and duration of occurrences when the source met or exceeded the conditions in 40 CFR 63.864(k)(1), and the number and duration of occurrences when the source met or exceeded the conditions in 40 CFR 63.864(k)(2). Reporting excess emissions below the violation thresholds of 40 CFR 63.864(k) does not constitute a violation of the applicable standard.
 - b. When no exceedances of parameters have occurred, the owner or operator must submit a semiannual report stating that no excess emissions occurred during the reporting period.
 - c. Quarterly and semiannual reports are to be postmarked no later than the 30th day following the end of the calendar quarter and semiannual period, respectively.
(9 VAC 5-80-110 and 40 CFR 63.864)
97. **HAP Metals Standards** - The permittee shall comply with the additional reporting requirements for HAP Metals standards as specified in 40 CFR 63.867(b).
(9 VAC 5-80-110 and 40 CFR 63.867(b))

D. Testing

98. **CAM Testing** - Compliance Assurance Monitoring (CAM) testing shall be conducted on the No. 5 Slaker to establish parametric indicator ranges (as specified in Condition B.79) for the control of Particulate Matter from the Slaker to prove compliance with the emission limits contained in Condition A.66. The tests shall be performed, and reported within 180 days after startup of the unit. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30, and the test methods and procedures contained in 9 VAC 5-40 Article 13. The details of the tests are to be arranged with the Department. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Department.
(9 VAC 5-80-110, 9 VAC 5-50-30, 40 CFR 64.4(d) & (e) and 9 VAC 5-40 Article 13)

VII. Chemical Recovery Process Area

The emission units associated with this section of the permit are the following:

Unit ID	Emission Unit Description	Unit ID	Emission Unit Description
CRE03	No. 6 Recovery Furnace	CRE16	Condensate Stripper System
	6 RF precipitator mix tank		Condensate Stripper Off Gas Venting
CRE06	No. 6 Rec. Smelt Dissolving Tank	CRE18	LVHC Collection System Drains & Tanks
	6 RF saltcake mix tank		Foul Condensate Tank #1
CRE08	E Set Evaporators		Foul Condensate Tank #2
CRE09	F Set Evaporators		6RB Foul Condensate Tank (LVHC)
CRE10	G Set Evaporators	CRE19	Stripper Off Gas System Drains & Tanks and condenser
CRE11	Weak Black Liquor Storage		#1 Gas Line Drain Pot
	#1 Weak Black Liquor Tank		#2 Gas Line Drain Pot
	#2 Dump tank		Low Pressure TRS Gas Line Drain Pot
	#2 Weak black liquor tank		Methanol Condenser Storage Tank
	#3 Weak black liquor tank	CRE20	Evaporators Venting
	#1 Dump tank	CRE21	BLOX Condenser Vent
CRE12	Intermediate Liquor Storage	CRE22	HVLC Gas Collection System – Condensate Drains & Tanks
	Reserve tanks (3) (See Section II)		F O ₂ / D Wash Foul Condensate Tank
	#3 Heavy Black liquor tank		BLOX Foul Condensate Tank
	#1 BLOX Tank		RB6 Foul Condensate Tank (HVLC)
CRE13	Heavy Black Liquor Storage	CRE23	Process Condensate Collection Tank & Stripper Feed Tank Venting
	73% black liquor tank		
CRE15	Process Condensate Collection Tank & Stripper Feed Tank		

A. Limitations

99. **Recovery Furnace PM Emissions Standard** - No owner or operator shall cause or permit to be discharged into the atmosphere from the No. 6 Recovery Furnace (CRE03) any particulate emissions in excess of 3.00 lb/ADTP.
 (9 VAC 5-80-110 and 9 VAC 5-40-1680)
100. **Smelt Dissolving Tank PM Emissions Standard** - No owner or operator shall cause or permit to be discharged into the atmosphere from the No. 6 Smelt Dissolving Tank (CRE06) any particulate emissions in excess of 0.75 lb/ADTP.
 (9 VAC 5-80-110 and 9 VAC 5-40-1680)
101. **PM Emission Limit** - The permittee must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere from the Recovery Furnace (CRE03) and the Smelt Dissolving Tank (CRE06) sources is less than or equal to the PM emission limit established under 40 CFR 63.862(a)(1)(ii) of Subpart MM.

PM emission limits for the Smelt Dissolving Tank (CRE06) and the Recovery Furnace (CRE03) shall be established as specified in 40 CFR 63.862(a)(1)(ii) using the methods in 40 CFR 63.865(a)(1) and (2). The limits must be reestablished if either of the following actions occurs:

- a. The air pollution control system for any existing Kraft Recovery Furnace, Smelt Dissolving Tank, or Lime Kiln is modified (as defined in 40 CFR 63.861) or replaced;
- b. Any Kraft Recovery Furnace, Smelt Dissolving Tank for which an emission limit was established is shut down for more than 60 consecutive days.

The limit shall be approved by the Department. The permittee shall show compliance with the established limit as defined in 40 CFR 63.865(b).

(9 VAC 5-80-110 and 40 CFR 63.862(a)(1)(ii))

102. **Recovery Furnace TRS Emissions Standard** - No owner or operator shall cause or permit to be discharged into the atmosphere from the Recovery Furnace (CRE03) any TRS in excess of 5 ppm by volume on a dry basis, corrected to 8% oxygen averaged on 24 hour basis.
(9 VAC 5-80-110 and 9 VAC 5-40-1690 and Condition VII.B.1 of the 4/3/12 FESOP)
103. **Evaporator Systems TRS Emissions Standard** - No owner or operator of any Multiple-Effect Evaporator Systems (CRE08, 09 & 10) shall cause or permit to be discharged into the atmosphere any TRS in excess of 5 ppm by volume on a dry basis, corrected to 10% oxygen.
(9 VAC 5-80-110, 9 VAC 5-40-1690 and 40 CFR 60.283(a)(1)(iii))
104. **Condensate Stripper TRS Emissions Standard** - No owner or operator of any Condensate (Steam) Stripper Systems (CRE16) shall cause or permit to be discharged into the atmosphere any TRS in excess of 5 ppm by volume on a dry basis, corrected to 10% oxygen.
(9 VAC 5-80-110, 9 VAC 5-40-1690 and 40 CFR 60.283)
105. **Smelt Dissolving Tank TRS Emissions Standard** - No owner or operator of the Smelt Dissolving Tank Unit (CRE06) shall cause or permit to be discharged into the atmosphere any TRS in excess of 0.033 pounds per ton of black liquor solids as H₂S.
(9 VAC 5-80-110 and 9 VAC 5-40-1690)
106. **Corrective Action** - Corrective action shall be implemented for the Smelt Dissolving Tank (CRE06) if any 3-hour average parameter value is outside the range of values established during the initial performance test in 40 CFR 63.864(j). The unit shall be considered in violation when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values (non SSM events) established in 40 CFR 63.864(j).
(9 VAC 5-80-110, 40 CFR 63.862(a)(1)(ii) and 40 CFR 63.864(j) & (k))
107. **Recovery Furnace Visible Emissions Limit** - Visible emissions from the Recovery Furnace (CRE03) shall not exceed 35% opacity. The permittee shall implement corrective action if the average of 10 consecutive 6-minute averages results in an opacity of greater than 20%. The unit shall be considered in violation of 40 CFR 63.862 if the opacity is greater than 35% for 6 percent or more of the operating time (non SSM events) within any quarterly period.
(9 VAC 5-80-110, 9 VAC 5-40-1710, 40 CFR 63.862(a)(1)(ii) and 40 CFR 63.864(j) & (k))
108. **Control of LVHC System HAP Emissions** - To comply with 40 CFR 63.443(a)(1) the facility shall control the HAP emissions from each LVHC system (See Appendix B)
(9 VAC 5-80-110 and 9 VAC 5-60-100)
109. **Pulping Process Condensates** - The pulping process condensates shall be collected (as specified in Condition 110) from the following equipment: each evaporator system (CRE08, 09 & 10), and each LVHC collection system (see Appendix B).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
110. **Pulping Process Condensate Collection Amount** - One of the following combinations of HAP-containing pulping process condensates generated, produced, or associated with the equipment systems listed Condition 109 shall be subject to the requirements of Conditions 111 - 113.
- All pulping process condensates from the equipment systems specified in Condition 109,
 - The combined pulping process condensates from each LVHC collection system and each HVLC collection system, plus pulping process condensate streams that in total contain at least 65 percent of the total HAP mass (as MeOH) from the digester system (UPM02), the turpentine recovery system (UPM20), and each evaporator system (CRE08, 09 & 10), expressed as a 15 day rolling average, or
 - The pulping process condensates from the equipment systems specified in Condition 109 that in total contain a total HAP mass of at least 11.1 lbs of total HAP (as MeOH) per ODTP, expressed as a 15 day rolling average.
- (9 VAC 5-80-110 and 9 VAC 5-60-100)

111. **Conveyance of Pulping Process Condensates** - The pulping process condensates shall be conveyed in a closed collection system which meets the individual drain system requirements specified in 63.960, 63.961 and 63.962 of 40 CFR Part 63, Subpart RR except for closed vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443(d) and 63.450, instead of in accordance with 40 CFR 63.693 as specified in 40 CFR 63.962(a)(3)(ii), (b)(3)(ii)(A), and (b)(5)(iii).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
112. **Pulping Process Condensates Collection System**- The condensate collection tank (CRE18) shall have a fixed roof and all openings shall be designed and operated with no detectable leaks as indicated by an instrument reading of <500 ppm VOC (40 CFR 60, Appendix A, Method 21) above background and vented into a closed-vent system meeting the requirements of 40 CFR 63.450 and routed to a control device that meets the requirements of 40 CFR 63.443(d). Each opening shall be maintained in a closed, sealed position at all times that the tank contains pulping process condensates or HAPs except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
113. **Treatment of Pulping Process Condensates** - The pulping process condensates shall be treated by the condensate (steam) stripper (CRE16). The treatment of the condensates by the condensate (steam) stripper shall reduce the total HAPs by either $\geq 92\%$ by weight or remove 10.2 pounds per ODTP. Each HAP removed from the process condensate streams during treatment and handling by the condensate (steam) stripper shall be enclosed and vented into a closed vent system (the LVHC collection system) and routed to the No. 6 Recovery Furnace (CRE03) or No. 4 Lime Kiln (CAU03) for destruction. The enclosures and closed vent systems shall meet the requirements of 63.443(d)(4) and 63.450 of 40 CFR Part 63, Subpart S. Methanol and other liquids condensed from the vapor discharged from the condensate (steam) stripper shall be routed to the No. 4 Lime Kiln (CAU03) for combustion.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
114. **Condensate Stripper Excess Emissions** - Periods of excess emissions for the condensate (steam) stripper system shall not be considered a violation as long as they do not exceed 10% of the total process operating time for the semi-annual reporting period. (40 CFR 63.446(g))
(9 VAC 5-80-110 and 9 VAC 5-60-100)
115. **Control Device Excess Emissions** - Periods of excess emissions reported under 40 CFR 63.455 shall not be a violation of 40 CFR 63.443(c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: (40 CFR 63.443(e))
- a. One percent for control devices used to reduce the total HAP emissions from the LVHC system; and
 - b. Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and
 - c. Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.
- (9 VAC 5-80-110 and 9 VAC 5-60-100)
116. **Requirements for Enclosures** - Each enclosure shall maintain negative pressure at each enclosure or hood opening. Each enclosure or hood opening closed during the initial performance test specified in 40 CFR 63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance or repairs.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
117. **Requirements for Positive Pressure Components** - Each component of the closed-vent system used to comply with 40 CFR 63.443(c), 63.444(b), and 63.445(b) that is operated at a positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500ppmv above background as measured by the procedures specified in 40 CFR 63.457(d).
(9 VAC 5-80-110 and 9 VAC 5-60-100)

118. **Control of Evaporator System and Condensate Stripper System TRS Emissions** - TRS emissions from the multiple effects evaporators (CRE08, 09 and 10) and the condensate (steam) stripper (CRE16) shall be controlled by routing gases to the No. 6 Recovery Furnace (CRE03) or the No. 4 Lime Kiln (CAU03) for destruction.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
119. **40 CFR Part 63, Subpart S** - Except where this permit is more restrictive than the applicable requirement the facility shall be operated in compliance with the requirements of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110, 9 VAC 5-60-90 and 9 VAC 5-60-100)

B. Monitoring

120. **Recovery Furnace CEMS** - Continuous Emission Monitoring Systems (CEMS) shall be installed to measure and record the emissions of TRS (Total Reduced Sulfur) from the stack of the No. 6 Recovery Furnace (CRE 03) corrected to 8% O₂. The CEMS shall be installed, calibrated, maintained, audited and operated in accordance with the requirements of the Department's approved procedures as defined in 9 VAC 5-40-1780D. Data shall be reduced to a 24-hour average. The SPAN VALUE for the TRS monitor shall be set in accordance with 40 CFR Part 60, Subpart BB (60.284).
(9 VAC 5-80-110, 9 VAC 5-40-1770, 9 VAC 5-40-1780 and Condition VII.B.2.a of the 4/3/12 FESOP)
121. **QA/QC Program** - A CEMS (for TRS of the Recovery Furnace) quality control program which is approved by the Department shall be implemented for all TRS continuous monitoring systems.
(9 VAC 5-80-110, 9 VAC 5-40-1780D and Condition VII.B.2.b of the 4/3/12 FESOP)
122. **Recovery Furnace COMS** - The permittee shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) on each exhaust stack of the No. 6 Recovery Furnace (CRE03). Each COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. The COMS data shall be reduced as specified in 40 CFR 63.8(g)(2) of 40 CFR 63 Subpart A.
(9 VAC 5-80-110 and, 40 CFR 63.864(d))
123. **Recovery Furnace COMS** - A continuous opacity monitoring system (COMS) shall be used to monitor the visible emissions requirement for the Recovery Furnace (CRE 03) in lieu of 40 CFR, Part 60, Appendix A, Method 9. Each COMS shall be maintained and calibrated in accordance with manufacturer's recommendations at a minimum.
(9 VAC 5-80-110 and Condition VII.B.2.c of the 4/3/12 FESOP)
124. **Smelt Dissolving Tank Scrubber CPMS** - The permittee shall install, calibrate, maintain and operate a CPMS for each Smelt Dissolving Tank Scrubber that shall be used to determine and record the fan amps and the scrubbing liquid flow rate. The CPMS shall track the parameter values on a 3-hour rolling average basis.
(9 VAC 5-80-110 and 40 CFR 63.864(e)(10) and (e)(13))
125. **Corrective Action** - The permittee must implement corrective action as specified in the startup, shutdown and malfunction plan prepared in accordance with 40 CFR 63.866(a) whenever either of the following occurs:
- The average of ten consecutive 6-minute averages from any Recovery Furnace COMS results in a measurement greater than 20% opacity.
 - The 3-hour average of any Smelt Dissolving Tank Scrubber CPMS parameter is outside its established operating range.
- (9 VAC 5-80-110 and 9 VAC 5-60-100)

126. **Violation Determination** - The permittee is considered to be in violation of the emission standards for a unit described in 40 CFR 63.862 if either of the following occur:
- When opacity from the Recovery Furnace measured by a COMS is greater than 35% for 6 percent of more of the operating time within any quarterly period, excluding opacity greater than 35% caused by startup, shutdown or malfunction.
 - When six or more 3-hour average CPMS values for a Smelt Dissolving Tank Scrubber parameter with any 6-month reporting period are outside the established operating range (from performance testing), excluding average CPMS values caused by startup, shutdown and malfunction.
(9 VAC 5-80-110, 40 CFR 63.6(f) and (h) and 40 CFR 63.864(k)(2)(i) and (k)(2)(iii))
127. **Enclosures and Closed-Vent System Inspections** - Except as described in Condition 131, each enclosure and closed vent system used to comply with Subpart S shall have a visual inspection conducted once during each calendar month, with at least 21 days elapsed time between inspections, to ensure each opening is maintained in the closed position and sealed. The permittee shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment. The inspection shall include the ductwork, piping, enclosures, and connections to covers for visible evidence of defects. An inspection log shall be kept containing the information specified in 40 CFR 63.454(b).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
128. **Negative Pressure Demonstration** - Except as described in Condition 131, each enclosure and closed-vent system shall demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in 63.457(e) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
129. **Positive Pressure Leak Demonstration** - Except as described in Condition 131, each positive pressure closed-vent system shall demonstrate initially and annually no detectable leaks as specified in 63.450(c) of 40 CFR Part 63, Subpart S measured by procedures in 63.457(d) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
130. **Closed Collection System Inspections** - Except as described in Condition 131, each pulping process condensate closed collection system shall be visually inspected once during each calendar month, with at least 21 days elapsed time between inspections. Recordkeeping requirements shall meet 63.454 of 40 CFR Part 63, Subpart S. Each collection tank shall be operated with no detectable leaks as specified in 63.446(d)(2)(i) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
131. **Inspection Frequency for Inherently Unsafe or Inaccessible Components** - Each enclosure, fixed roof cover, or component of the pulping process closed-vent and condensate collection systems that is identified in the mill's site-specific LDAR Plan as being in a location that is inherently unsafe or inaccessible is exempt from monthly or annual inspections, monitoring and repair requirements. Such enclosures, covers, and components are to be inspected, monitored, and repaired as described in the LDAR Plan.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
132. **Condensate Collection Tank Leak Inspections** - Each condensate collection tank (CRE18) shall be operated with no detectable leaks as specified in 63.446(d)(2)(i) of 40 CFR Part 63, Subpart S measured initially and annually by the procedures in 63.457(d) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
133. **Condensate (Steam) Stripper Monitoring** -
- To demonstrate compliance with the 92% reduction of HAPs, the condensate (steam) stripper shall be equipped with a device to continuously measure and record the process wastewater feed rate; the steam feed rate; and the process wastewater column feed temperature.

- b. To demonstrate compliance with the alternative requirement for the condensate (steam) stripper (CRE16) to remove 10.2 lbs HAPs per ODTP, the system to condense methanol and other liquids from the stripper vapor shall be equipped with devices to continuously measure and record the flow rate and density of the liquid stream discharged to the No. 4 Lime Kiln for combustion.
 - c. Monitoring will be done using 3-hour rolling averages for the steam to feed ratio, process wastewater column feed temperature, condensed liquid stream flow rate, and condensed liquid density. The steam feed rate and process wastewater feed rate will be used to determine the steam to feed ratio. The condensed liquid stream flow rate and density shall be used to determine the HAPs removal rate by the condensate (steam) stripper.
 - d. Each monitoring device shall be installed, maintained and calibrated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the condensate (steam) stripper is operating.
- (9 VAC 5-80-110, 9 VAC 5-50-20 C, 9 VAC 5-50-260 and 9 VAC 5-60-100)

134. Pulping Process Condensate Collection System Monitoring -

- a. To demonstrate compliance with Condition A.110.a, the permittee shall ensure that any bypass valves on the condensate collection system required in Condition A.111 are closed.
- b. To demonstrate compliance with MACT compliance method requirement of 65% collection of all HAPs (as MeOH) produced per Condition A.110.b, the permittee shall monitor/calculate, on a daily basis, the HAP (as MeOH) mass from the digester system, turpentine system, and evaporator system and the HAP (as MeOH) mass of the collected streams which shall be sent to the condensate (steam) stripper for treatment. The daily monitoring shall be generated from flows, mass balance, and the once per permit term HAP (as MeOH) testing. The daily HAP (as MeOH) mass shall be averaged over a 15-day period to determine a 15-day rolling average of the percent of HAP (as MeOH) collected.
- c. To demonstrate compliance with the MACT compliance method requirement to collect at least 11.1 lbs of total HAP (as MeOH) produced per ODTP per Condition A.110.c the permittee shall determine on a daily basis the total HAP mass (as MeOH) collected from the digester system, the turpentine system, evaporator systems, and the LVHC and HVLC collection systems being sent to the condensate (steam) stripper for treatment. The daily determination shall be made using the daily average combined flow rate to the condensate (steam) stripper feed tank, and the representative average total HAP (as MeOH) concentration in this condensate as determined using Condition V.D.60. The daily HAP mass (as MeOH) collected shall be averaged over a 15-day period to determine a 15-day rolling average of the amount of HAP (as MeOH) collected.

(9 VAC 5-80-110 and 9 VAC 5-60-100)

- 135. Condensate (Steam) Stripper Alarms and Log -** An alarm shall be used to signal when the monitoring parameters (the process wastewater feed rate; the steam feed rate; and the process wastewater column feed temperature of the condensate (steam) stripper) drift out of the acceptable range triggering the need for prompt corrective action. The permittee shall keep a log summarizing each event (date and time of commencement and completion, parameter monitoring exceedances) and corrective action taken.

(9 VAC 5-80-110 and 9 VAC 5-50-50H)

- 136. LVHC Collection System Monitoring -** The computer system used to continuously monitor each vent of the LVHC collection system shall be equipped with an alarm to alert the operator when a release has occurred.

(9 VAC 5-80-110 and 9 VAC 5-50-50H)

137. **Recovery Furnace ESP Monitoring (CAM)** - The permittee shall monitor, operate, and maintain the electrostatic precipitator (ESP) controlling the No. 6 Recovery Furnace (CRE03) according to the following table. Any failure of the ESP equipment shall be recorded in an event log. For all equipment failures that cannot be repaired the same day, best efforts shall be made to repair the element no later than the next available unit outage appropriate to the repair task. The log shall also include a history of the actions taken to correct the problem and restore the equipment back to operation.

Emission Unit		No. 6 Recovery Furnace Emission Unit : CRE03 Emission Point: CRESV03A, CRESV03B Control Device: CRECD03		
Description		209,000 lb/hr black liquor solids		
Control Device		Electrostatic Precipitator		
Applicable Requirement		9 VAC 5-40-1680 , 40 CFR 63.862(a)(1)(i) and (ii)		
Regulated Pollutant		Particulate matter		
Emission Limit		3.00 lb/ADTP (1680 limit), Subpart MM limit		
I. CAM Indicator		Visible Emissions (Opacity)	Electrostatic Precipitator Field Voltage	Electrostatic Precipitator Basic Care Inspection
Measurement Approach		Continuous opacity monitoring system	Continuous monitoring by Distributive Control System (DCS)	
Monitoring Frequency		Continuous	Continuous	Weekly Inspection
Justification		Visible emissions in excess of allowable levels are indicative of control device malfunction	Field fault alarms are an indication of control device malfunction	Any deviations noted from detailed checklist / diagnostic test are an indication of control device malfunction
II. Indicator Range		Opacity greater than 20% with an allowance of 35% for one 6-minute period per hour	Zero Voltage or Fault	
III. Performance Criteria				
Data Representativeness	Detector Location	Recovery Furnace exhaust stacks downstream of the ESP	Individual Voltage field controllers	
	Sensor Specs (a) Range	0-100% Opacity	0 – 50K Volts	
	(b) Accuracy	± 1% opacity		
	Acquisition Procedure	electronic data file via data acquisition system – sampling and analysis at least for each successive 10-second period and one cycles of data recording for each successive 6-minute period	Field controllers continuously monitor field voltage readings. When the field controller detects a fault with a field, an alarm is initiated on the Operator's console through the Distributive Control System (DCS).	
	Data Recording System	PI System	Operator will record DCS alarm times, cause and corrective actions for any ESP faults in an event log.	
QA/QC Practices and Criteria		Per MACT QA/QC Plan	Once / Week Basic Care Route	Run diagnostics / inspect rappers, check instantaneous field voltages, check oxygen concentration, inspect blowers, check TR (transformer rectifier) operation
Data Collection Procedures		Visible emission measurements will be taken in at least every ten-second intervals; average value for each one-minute period is recorded. The one-minute values are averaged over a six-minute period to assess compliance with the indicator range	Continuous Scan	
Averaging period		6 minutes		

138. **Smelt Dissolving Tank Scrubber Monitoring (CAM)** - The permittee shall monitor, operate, and maintain the scrubbers controlling the No. 6 Smelt Dissolving Tank (CRE06) according to the following:

Emission Unit	No. 6 Smelt Dissolving Tank		
Description	209,000 lb/hr black liquor solids smelt dissolving tank		
Control Device	Two scrubbers (East & West)		
Applicable Requirement	9 VAC 5-40-1680 and 40 CFR 63.862(a)(1)(i) and (ii)		
Regulated Pollutant	Particulate Matter		
Emission Limit	0.75 lb/ADTP Subpart MM limit		
I. CAM Indicator	Exhaust fan amperage and scrubber liquid flow rate for each scrubber		
Measurement Approach	Continuous parameter monitoring system, as currently required by 40 CFR Part 63, Subpart MM		
Monitoring frequency	At least once every 15-minute period using procedures in 40 CFR 63.8(c). Four 15-minute averages comprise the one-hour averages and three one-hour averages comprise the three-hour rolling average		
Justification	Fan amperage (as approved per DEQ as an alternate method) and scrubbing liquid flow rate are the appropriate control device performance indicators to monitor in accordance with 40 CFR 63 Subpart MM requirements for chemical recovery system process units using a wet scrubber for particulate matter control.		
II. Indicator Range	Fan amperage 35% Full load amps (3-hr rolling average)	Scrubber liquid flow rate 41.0 gpm (East), 51.0 gpm (West), minimum flow rate to scrubber (3-hr rolling average)	
	These indicator were established during the most recent performance test for Subpart MM		
III. Performance Criteria			
Data Representativeness	Detector Location	Located at each scrubber motor	Liquid flow sensor in liquid recirculation line
	(a) Range	0 to 150 A	0 to 150 gpm
	(b) Accuracy	±0.5%	±0.25% of transmitter range
	Acquisition Procedure	1-hour data are combined to create 3-hour rolling average	
	Data Recording system	PI System	
QA/QC Practices and Criteria		Per Subpart MM QA/QC Plan	
Data Collection Procedures		Proficy data collection system and PI data historian	
Averaging Period		3-hour rolling	

(9 VAC 5-80-110E and 40 CFR 64)

139. **LVHC Collection System Monitoring (CAM)** - The permittee shall monitor, operate, calibrate and maintain the LVHC Collection System to collect the gases from the digester, evaporators, condensate (steam) stripper, turpentine system and the chip bin according to the following:

Emission Unit	LVHC Collection System Vents Emission Units: UPM02, UPM19, UPM20 Emission Points: CRESV03 A & B and CAUSV03 Control Devices: CRE03 and CAU03
Description	Digester, evaporators, condensate (steam) stripper, turpentine system and chip bin
Control Device	No. 6 Recovery Furnace and No. 4 Lime Kiln
Applicable Requirement	9 VAC 5-40-1690
Regulated Pollutant	TRS
Emission Limit	5 ppm @ 10% O ₂
I. CAM Indicator	Routing process gases to Recovery Furnace or Lime Kiln for incineration, limiting process venting as required by 40 CFR Part 63 (MACT), Subpart S.
Measurement Approach	Vent monitoring systems
Monitoring Frequency	Continuous monitoring of LVHC Collection System emergency bypass vents
Justification	No direct temperature monitoring of the Recovery Furnace and Lime Kiln is required for TRS incineration per VADEQ 4/11/95 letter. This determination was made based on the revisions to 40 CFR Part 60 (NSPS) Subpart BB which deleted the requirement to monitor combustion temperature.
II. Indicator Range	Process venting to less than 1% as required by MACT Subpart S.
III. Performance Criteria	
Data	Detector Location
	Sensor specs
	Acquisition Procedure
	Data Recording System
QA/QC Practices and Criteria	Per MACT QA/QC plan
Data Collection Procedures	Proficy data collection system
Averaging Period	Annual

(9 VAC 5-80-110E and 40 CFR 64)

140. **CAM** - The permittee shall conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.

(9 VAC 5-80-110E and 40 CFR 64.6(c))

141. **Monitoring Equipment Maintenance (CAM)** - At all times, the permittee shall maintain the monitoring equipment, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment, except as specified in the QA/QC Plan for equipment that is subject to an extended temporary shutdown.

(9 VAC 5-80-110E and 40 CFR 64.7(b))

142. **Monitoring System Operation (CAM)** - Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the Recovery Furnace (CRE03), Smelt Dissolving Tank (CRE06) and/or the LVHC Collection System are operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of compliance assurance monitoring, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by inadequate maintenance or improper operation are not malfunctions.

(9 VAC 5-80-110E and 40 CFR 64.7(c))

143. **Response to Excursions and Exceedances (CAM)** - Upon detecting an excursion or exceedance, the permittee shall restore operation of the associated unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup and shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator, designated condition, or below the applicable emission limitation or standard, as applicable. (9 VAC 5-80-110E and 40 CFR 64.7(d)(1))
144. **Response to Excursions and Exceedances (CAM)** - Determination that acceptable procedures were used in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. (9 VAC 5-80-110E and 40 CFR 64.7(d)(2))
145. **Notifications (CAM)** - If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Department and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (9 VAC 5-80-110E and 40 CFR 64.7(e))
146. **QIP Requirements (CAM)** - If the accumulation of exceedances or excursions exceeds 5% duration of the operating time for each of the Recovery Furnace's opacity monitoring systems, the Smelt Dissolving Tank Scrubbers or the LVHC Collection System for a semiannual reporting period, the permittee shall develop, implement and maintain a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. If a QIP is required, the permittee shall have it available for inspection. The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following, as appropriate:
- Improved preventative maintenance practices;
 - Process operation changes;
 - Appropriate improvements to control methods;
 - Other steps appropriate to correct control performance; and
 - More frequent or improved monitoring.
- (9 VAC 5-80-110E and 40 CFR 64.8(a) and (b))

C. Recordkeeping and Reporting

147. **Recordkeeping** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Department. These records shall include, but are not limited to:
- Records of black liquor solids firing rates in tons/day for the Recovery Furnace (CRE03).
 - Number of minutes each venting system vents from the LVHC collection system to the atmosphere and all TRS event minute records.

- c. Stack test data of particulate matter for the Recovery Furnace (CRE03).
- d. Records of monitoring parameter ranges established for each Smelt Dissolving Tank Scrubber.
- e. Records of Smelt Dissolving Tank Scrubber parameter monitoring data, including any period when the parameter levels were inconsistent with the parameter's established operating range, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken.
- f. Records and document of supporting calculations for compliance determinations with 40 CFR 63.865(a) through (e).
- g. Daily monitoring of the percent, or alternatively the amount, of HAP (as MeOH) collected and the 15 day rolling average (This is only necessary when compliance is based on either the 65% collection of all HAPs produced requirement or the 11.1 lb HAPs produced per ODTP requirement).
- h. Daily amount of ODTP processed. (This is only necessary when condensate collection compliance is based on the 11.1 lbs per ODTP requirement or when condensate treatment compliance is based on the 10.2 pounds per ODTP limit.)
- i. Daily amount of HAPs (as MeOH) sent to the condensate (steam) stripper or daily amount of HAPs condensed from the condensate (steam) stripper vapor stream and sent to the No. 4 Lime Kiln for combustion. (This is only necessary when compliance is based on the 10.2 pounds per ODTP limit.)
- j. Daily amount of HAPs (as MeOH) removed by the condensate (steam) stripper or daily amount of HAPs (as MeOH) condensed from the vapor discharged from the condensate (steam) stripper and sent to the No. 4 Lime Kiln for combustion. (This is only necessary when compliance is based on the 10.2 pounds per ODTP limit.)
- k. Monthly visual observation logs of the LVHC closed vent collection system including the information specified in 40 CFR 63.454(b).
- l. Annual monitoring of the condensate collection tank, condensate closed collection system, and closed-vent systems.
- m. Continuous monitoring system calibrations and equipment checks, percent operating time, and excess emissions.
- n. Operation and control device monitoring records for the LVHC collection system and the condensate (steam) stripper.
- o. Scheduled and unscheduled maintenance and operator training of air pollution control equipment, monitoring devices, and process equipment which affect emissions.
- p. Initial and continuing compliance testing.
- q. TRS emissions corrected to 8% O₂ from the Recovery Furnace, calculated daily as the average of each 24-hour period.
- r. Records of visual evaluations, visible emissions evaluations and any corrective action taken.
- s. The permittee shall maintain records of any occurrence when corrective action is required under 40 CFR 63.864(k)(1)(ii), and when a violation is noted under 40 CFR 63.864(k)(2)(i) or (iii).

These records shall be available at the facility for inspection by the Department and shall be current for the most recent 5 years.

(9 VAC 5-80-110 and 40 CFR 63.866 and Condition VII.B.3 of the 4/3/12 FESOP)

148. **TRS Excess Emissions Reports** - The permittee shall furnish written reports to the Department of excess TRS emissions from the process (CRE 03) monitored by a continuous monitoring system (CEMS) on a quarterly basis, postmarked no later than the 30th day following the end of the calendar quarter. These reports shall include, but are not limited to the following information:

- a. The magnitude of excess emissions, any conversion factors used in the calculation of excess emissions, and the date and time of commencement and completion of each period of excess emissions;
- b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the process, the nature and cause of the malfunction (if known), the corrective action taken or preventative measures adopted;
- c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and
- d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in that report.

(9 VAC 5-80-110 and 9 VAC 5-40-50C)

149. **Quarterly Reports**

- a. The permittee shall furnish written quarterly reports to the Department of the following:
 - i. Any instances of corrective action required to be implemented (in accordance with 40 CFR 63.864(k)(1)(i) and (ii) of Subpart MM) for any Smelt Dissolving Tank monitored parameter, or
 - ii. Any Recovery Furnace COMS exceedance.
- b. This report shall contain the information specified in 40 CFR 63.10(c) of as well as the number and duration of occurrences when the source met or exceeded the conditions in 40 CFR 63.864(k)(1), and the number and duration of occurrences when the source met or exceeded the conditions in 40 CFR 63.864(k)(2). Reporting excess emissions below the violation thresholds of 40 CFR 63.864(k) does not constitute a violation of the applicable standard.
- c. When no exceedances of parameters have occurred, the owner or operator shall submit a semiannual report stating that no excess emissions occurred during the reporting period.
- d. Quarterly and semiannual reports are to be postmarked no later than the 30th day following the end of the calendar quarter and semiannual period, respectively.

(9 VAC 5-80-110 and 40 CFR 63.867(c))

150. **LVHC Reports** - The permittee shall submit excess emissions and continuous monitoring system reports (for the condensate collection system and the LVHC closed-vent collection systems) as described in Condition V.C.59.

(9 VAC 5-80-110 and 9 VAC 5-50-50)

151. **HAP Metals** - The permittee shall comply with the additional reporting requirements for HAP Metals standards as specified in 40 CFR 63.867(b) within 180 days of the event that triggers this notification.

(9 VAC 5-80-110 and 40 CFR 63.867(b))

D. Testing

152. **Stack Test** - The permittee shall perform a stack test once each permit term on the No. 6 Recovery Furnace (CRE 03) to prove compliance with the particulate matter emission standard specified in Condition A.99.

(9 VAC 5-80-110)

153. **Stack Test** – The permittee shall perform a stack test once each permit term on the No. 6 Smelt Dissolving Tank (CRE06) to demonstrate compliance with the TRS emission standard specified in Condition A.105.
(9 VAC 5-80-110)
154. **Pulping Process Condensate Collection Amount Compliance Testing -**
- a. To demonstrate compliance with the 65% collection of all HAPs (as MeOH) produced, the permittee shall perform testing for the HAP (as MeOH) mass from the streams named in Condition V.A.32 and the HAP (as MeOH) mass of the collected streams which shall be sent to the condensate (steam) stripper for treatment. The daily HAP (as MeOH) mass shall be averaged over a 15-day period to determine a 15-day rolling average of the percent of HAP (as MeOH).
 - b. Alternatively, to demonstrate compliance with the 11.1 lbs per Oven Dried Ton of Pulp condensate collection requirement, the permittee shall perform testing to determine the representative average total HAP (as MeOH) concentration in the combined stream to the condensate (steam) stripper feed tank. The testing shall be conducted in a manner suitable to establish a 15-day average total HAP (as MeOH) concentration.

The testing shall be performed once per permit term.

(9 VAC 5-80-110)

VIII. Bleach Plant Process Area

The emission units associated with this section of the permit are the following:

Unit ID	Emission Unit Description	Unit ID	Emission Unit Description
BLP03	F Bleach Line	BLP06	High Density Storage Chests
	Washer Hoods		#4 Hi density chest (bleached)
	Post O ₂ Surge Tank		#41 Hi density chest (unbleached)
	D Tower	BLP07	High Density Chests
	D Tower Seal Tank		#44 Hi-density chest (bleached)
	DO Tower	BLP08	SVP Plant
	DO Tower Seal Tank		Scrubber Vent Pipe
	Oxygen Gas Cooler		ClO ₂ Generator Explosion Hatch Vent Pipe
BLP05	F Bleach O₂ Delignification		2 Chlorine Dioxide Storage Tanks
	Pre-O ₂ Blend Chest	BLP09	R3 Plant
	O ₂ Reactor		Scrubber Vent Pipe
	Pre-O ₂ Pressate Tank		ClO ₂ Generator Explosion Hatch Vent Pipe
	O ₂ -1 Pressate Tank	BLP11	F Oxygen Delignification HVLC Gas System Venting
	O ₂ -2 Pressate Tank	BLP13	HVLC Gas Collection System Venting at No. 6 Recovery Furnace
	O ₂ Blow Tank	BLP14	HVLC Collection System - Condensate Drains
	Pre O ₂ , O ₂ -1 and O ₂ -2 Presses		D-Wash Condensate Tank
	O ₂ Interstage Chest		Combined Condensate Tank
		BLP15	Methanol Tank

A. Limitations

155. **Bleach Plant Emission Controls** - Chlorinated HAP emissions from each stage of the bleach line (BLP03) where chlorinated compounds are introduced shall be controlled by a collection and scrubber system. The collection and scrubber system shall be provided with adequate access for inspection and shall be in operation when the bleach line is operating.
 (9 VAC 5-80-110 and 9 VAC 5-60-100)
156. **Collection and Control of Chlorinated HAP Emissions** - The bleach plant collection system for the bleach line (BLP03) shall be a closed vent system routed to a scrubber. All emissions from the scrubber shall meet an outlet concentration of 10 ppm or less by volume of total chlorinated HAP (40 CFR 63.445(c)(2)).
 (9 VAC 5-80-110, 9 VAC 5-60-100, 40 CFR 63.445(c)(2) and 40 CFR 63.450)
157. **Chlorinated HAP Emission Control System Requirements** - The bleach plant collection and scrubber system shall be operated in compliance with the requirements of 40 CFR 63.450 and 40 CFR 63.453.
 (9 VAC 5-80-110, 9 VAC 5-60-100, 40 CFR 63.450 and 40 CFR 63.453)
158. **Oxygen Delignification System Emission Controls** - To comply with 40 CFR 63.443(a)(1) the facility shall control the HAP emissions from each oxygen delignification system (BLP05). The collection of HVLC system gases shall include the gases from this system.
 (9 VAC 5-80-110 and 9 VAC 5-60-100)
159. **Collection and Treatment of HVLC Gases** - The HVLC system gases from this process area shall be collected by a closed vent system and routed in accordance with 40 CFR 63.443(d)(4) to the No. 6 Recovery Furnace (CRE03) for destruction.
 (9 VAC 5-80-110 and 9 VAC 5-60-100)
160. **Collection of HVLC Collection System Condensates** - The pulping process condensates shall be collected from each HVLC collection system listed in Condition 158.
 (9 VAC 5-80-110 and 9 VAC 5-60-100)

161. **Conveyance of Pulping Process Condensates** - The pulping process condensates shall be conveyed in a closed collection system which meets the individual drain system requirements specified in 63.960, 63.961, and 63.962 of 40 CFR Part 63, Subpart RR except for closed vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443(d) and 63.450, instead of in accordance with 63.693 of 40 CFR Part 63, Subpart DD as specified in 40 CFR 63.962(a)(3)(ii), (b)(3)(ii)(A), and (b)(5)(iii). (9 VAC 5-80-110 and 9 VAC 5-60-100)
162. **Pulping Process Condensates Collection System** The condensate collection tank (BLP14) shall have a fixed roof and all openings shall be designed and operated with no detectable leaks as indicated by an instrument reading of <500 ppm VOC (Method 21) above background and vented into a closed-vent system meeting the requirements of 40 CFR 63.450 and routed to a control device that meets the requirements of 40 CFR 63.443(d). Each opening shall be maintained in a closed, sealed position at all times that the tank contains pulping condensates or HAPs except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair. (9 VAC 5-80-110 and 9 VAC 5-60-100)
163. **Treatment of Pulping Process Condensates** - The pulping process condensates shall be treated by the condensate (steam) stripper. The treatment of the condensates by the condensate (steam) stripper shall reduce the total HAPs by either $\geq 92\%$ by weight or remove 10.2 pounds per ODTP. Each HAP removed from the pulping process condensate streams during treatment and handling by condensate (steam) stripper shall be enclosed and vented into a closed vent system (the LVHC collection system) and routed to No. 6 Recovery Furnace (CRE03) or No. 4 Lime Kiln (CAU03) for destruction. The enclosures and closed vent systems shall meet the requirements of 63.443(d)(4) and 63.450 of 40 CFR Part 63, Subpart S. (9 VAC 5-80-110 and 9 VAC 5-60-100)
164. **Requirements for Enclosures** - Each enclosure shall maintain negative pressure at each enclosure or hood opening. Each enclosure or hood opening closed during the initial performance test specified in 40 CFR 63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance or repairs. (9 VAC 5-80-110 and 9 VAC 5-60-100)
165. **Requirements for Positive Pressure Components** - Each component of the closed-vent system used to comply with 40 CFR 63.443(c), 63.444(b), and 63.445(b) that is operated at a positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500ppmv above background as measured by the procedures specified in 40 CFR 63.457(d). (9 VAC 5-80-110 and 9 VAC 5-60-100)
166. **Control Device Excess Emissions** - Periods of excess emissions reported under 40 CFR 63.455 shall not be a violation of 40 CFR 63.443(c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: (40 CFR 63.443(e))
- One percent for control devices used to reduce the total HAP emissions from the LVHC system; and
 - Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and
 - Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.
- (9 VAC 5-80-110 and 9 VAC 5-60-100)

167. **Methanol Tank Operating Requirements** - Except where this permit is more restrictive than the applicable requirement, the Methanol Tank (BLP15) shall be operated in compliance with the requirements of 40 CFR 60, Subpart Kb and 9 VAC 5-40-Article 25.
- a. The Methanol tank is subject to only parts 60.116b(a) and (b) of 40 CFR 60, Subpart Kb.
 - b. The Methanol tank shall be filled through the use of a submerged fill pipe.
(9 VAC 5-80-110, 9 VAC 5-40-3430A, 9 VAC 5-50-400 and 9 VAC 5-50-410)
168. **40 CFR Part 63, Subpart S** - Except where this permit is more restrictive than the applicable requirement the facility shall be operated in compliance with the requirements of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110, 9 VAC 5-60-90 and 9 VAC 5-60-100)

B. Monitoring

169. **Collection and Scrubber System Monitoring Requirements** - The bleach plant collection and scrubber system shall be equipped with a device to continuously measure and record: the pH of the gas scrubber effluent; the gas scrubber liquid influent flow rate; and the operation of the fan motor for the vent gas flow (low speed alarm). Monitoring shall be done using 3-hour rolling averages for the pH and the liquid flow rate. Monitoring shall be done continuously on the fan operation. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the bleach line and scrubber are operating.
(9 VAC 5-80-110, 9 VAC 5-60-100 and 40 CFR 63.446(c)(2))
170. **Bleach Plant Scrubber Monitoring System Alarms** - An alarm shall be used to signal when the monitoring parameters (the pH of the gas scrubber effluent, the gas scrubber liquid influent flow rate, and the operation of the fan motor for the vent gas flow (low speed alarm) drift out of the acceptable range triggering the need for prompt corrective action. The permittee shall keep a log summarizing each event (date and time of commencement and completion, parameter monitoring exceedances) and corrective action taken.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
171. **Repair or Replacement of Bleach Plant Vent Gas Fan Blades** - If repair or replacement of the fan blades or fan motor(s) for the vent gas to the scrubber is required, the permittee shall furnish written notification to the Department within 14 days of the occurrence. After the repair or replacement, a new stack test shall be performed to demonstrate compliance with Condition A.156, or the permittee shall demonstrate by some other means that the gas flow rate has not increased to the scrubber as a result of the changes. The notification shall describe the nature of the work done and how permittee plans to demonstrate compliance with Condition A.156.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
172. **Enclosure and Closed-Vent System Inspections** - Except as described in Condition 176, each enclosure and closed vent system used to comply with Subpart S shall have a visual inspection conducted once during each calendar month, with at least 21 days elapsed time between inspections, to ensure each opening is maintained in the closed position and sealed. The permittee shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment. The inspection shall include the ductwork, piping, enclosures, and connections to covers for visible evidence of defects. An inspection log shall be kept containing the information specified in 40 CFR 63.454(b).
(9 VAC 5-80-110 and 9 VAC 5-60-100)
173. **Negative Pressure Demonstrations** - Except as described in Condition 176, each enclosure and closed-vent system shall demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in 63.457(e) of 40 CFR Part 63, Subpart S.
(9 VAC 5-60-100)

174. **Positive Pressure Leak Demonstrations** - Except as described in Condition 176, each positive pressure closed-vent system shall demonstrate initially and annually no detectable leaks as specified in 63.450(c) of 40 CFR Part 63, Subpart S measured by procedures in 63.457(d) of 40 CFR Part 63, Subpart S.
(9 VAC 5-60-100)
175. **Closed Collection System Inspections** – Except as described in Condition 176, each pulping process condensate closed collection system shall be visually inspected once during each calendar month, with at least 21 days elapsed time between inspections. Recordkeeping requirements shall meet 63.454 of 40 CFR Part 63, Subpart S. Each collection tank shall be operated with no detectable leaks as specified in 63.446(d)(2)(i) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
176. **Inspection Frequency for Inherently Unsafe or Inaccessible Components** – Each enclosure, fixed roof cover, or component of the pulping process closed-vent and condensate collection systems that is identified in the mill's site-specific LDAR Plan as being in a location that is inherently unsafe or inaccessible is exempt from monthly or annual inspections, monitoring and repair requirements. Such enclosures, covers, and components are to be inspected, monitored, and repaired as described in the LDAR Plan.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
177. **Condensate Collection Tank Leak Inspections** - Each condensate collection tank (BLP14) shall be operated with no detectable leaks as specified in 63.446(d)(2)(i) of 40 CFR Part 63, Subpart S measured initially and annually by the procedures in 63.457(d) of 40 CFR Part 63, Subpart S.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
178. **Pulping Process Condensate Collection System Monitoring** - To demonstrate compliance with Condition VIII.A.6, the permittee shall ensure that any bypass valves on the condensate collection system required in Condition VIII.A.7 are closed.
(9 VAC 5-80-110 and 9 VAC 5-60-100)
179. **Operations and HVLC Collection System Venting Monitoring** - The permittee shall monitor the control equipment downtime, the process operating times and the venting minutes from the HVLC collection systems.
(9VAC5-80-100)

C. Recordkeeping and Reporting

180. **Recordkeeping** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Department. These records shall include, but are not limited to:
- a. Monthly visual observation logs of the bleach plant and HVLC closed vent collection systems including the information specified in 40 CFR 63.454(b);
 - b. Continuous monitoring system calibrations and calibration checks, percent operating time, and excess emissions;
 - c. Operation and control device monitoring records for the bleach plant scrubber;
 - d. Scheduled and unscheduled maintenance and operator training of air pollution control equipment, monitoring devices, and process equipment that affects emissions;
 - e. Initial and continuing compliance testing; and
 - f. Dimensions of the Methanol Tank and an analysis showing the capacity of the Tank. These records shall be kept for the life of the storage vessel.
 - g. Log of control device downtime and process operating time

These records shall be available at the facility for inspection by the Department and shall be current for the most recent 5 years.

(9 VAC 5-80-110 and 9 VAC 5-60-100)

181. **Reports** - The permittee shall submit excess emissions and continuous monitoring system (for the bleach plant scrubber parameters and the HVLC closed-vent collection system) reports as described in Condition V.C.59.
- (9 VAC 5-80-110 and 9 VAC 5-50-50)

IX. Pulp Machine Process Area

The emission units associated with this section of the permit are the following:

Unit ID	Emission Unit Description	Unit ID	Emission Unit Description
PRM04	No. 4 Fluff Pulp Machine	PRM11	Bleached Stock LD Storage
	Fourdrinier vents (2)		

A. Recordkeeping

182. **Recordkeeping** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Department. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110)

X. Power House Process Area

The emission units associated with this section of the permit are the following:

Unit ID	Emission Unit Description	Unit ID	Emission Unit Description
PWR05	No. 9 Power Boiler with duct burner	PWR12	LVHC System Venting

A. Limitations

183. **Approved Fuel** - The approved fuel for the combustion turbine and duct burner (PWR05) is natural gas. (9 VAC 5-80-110 and Condition VII.C.1.a of the 4/3/12 FESOP)
184. **Combustion Turbine/Duct Burner Emission Controls** - PM, PM₁₀ and SO₂ emissions from the combustion turbine and duct burner (PWR05) shall be minimized by use of natural gas. (9 VAC 5-80-110 and Condition VII.C.1.b of the 4/3/12 FESOP)
185. **Combustion Turbine/Duct Burner Emission Controls** - NO_x emissions shall be controlled as follows:
- in the combustion turbine (PWR05), itself, by low-NO_x natural gas combustors;
 - in the duct burner (PWR05), itself, by low-NO_x burners; and
 - from the combustion turbine and duct burner (PWR05) combined by selective catalytic reduction (SCR). (9 VAC 5-80-110 and Condition VII.C.1.c of the 4/3/12 FESOP)
186. **Combustion Turbine/Duct Burner Emission Controls** - CO and VOC emissions from the combustion turbine (PWR05) and duct burner shall be controlled by oxidation catalyst and good combustion practices. (9 VAC 5-80-110 and Condition VII.C.1.d of the 4/3/12 FESOP)
187. **Combustion Turbine Emission Controls** - Formaldehyde emissions from the combustion turbine (PWR05) shall be controlled by good combustion practices. (9 VAC 5-80-110 and Condition VII.C.1.e of the 4/3/12 FESOP)
188. **SCR Emission Controls** - Ammonia slip from the SCR (PWR05) shall be controlled by good process control instrumentation and proper ammonia distributor grid configuration. (9 VAC 5-80-110 and Condition VII.C.1.f of the 4/3/12 FESOP)
189. **Combustion Turbine Emission Limits** - Emissions from the operation of the combustion turbine (PWR05) shall not exceed the limits specified below:
- | | | |
|---------------------------------------|-----------------|-------------------------|
| Nitrogen Oxides (as NO ₂) | 0.2 lbs/MMBtu | 1-hour averaging period |
| | 0.035 lbs/MMBtu | 30-day averaging period |
| Carbon Monoxide | 0.06 lbs/MMBtu | 30-day averaging period |
- Compliance with these limits shall be determined by CEMS data. (9 VAC 5-80-110, 40 CFR 60.40b, 40 CFR 60.46b(f)(2) and Condition VII.C.1.i of the 4/3/12 FESOP)
190. **SCR System Operation** - The SCR unit shall operate at all times that the combustion turbine (PWR05) is operating, except during startup, shutdown, and malfunctions. During combustion turbine startup, the permittee shall begin use of SCR (commence ammonia injection) within 2 hours of the initial combustion turbine firing, or when the temperature of the catalyst bed reaches a suitable predetermined temperature level, whichever occurs first. During combustion turbine shutdown, the permittee shall discontinue use of the SCR (discontinue ammonia injection) when the temperature of the catalyst bed drops below a predetermined temperature level, but not more than 2 hours prior to the time at which the fuel feed to the combustion turbine is discontinued. The permittee shall operate the facility in a manner so as to optimize the effectiveness of the SCR units while minimizing ammonia slip. (9 VAC 5-80-110 and Condition VII.C.1.g of the 4/3/12 FESOP)

B. Monitoring

191. **NO_x CEMS** - Continuous emissions monitoring data from the No. 9 Power Boiler (PWR05) for nitrogen oxide shall directly determine compliance with emission limits on an hourly basis and a 30-day rolling average basis. Minimum data capture, quality assurance, and reporting requirements of NSPS 40 CFR 60.13, 60.48b(f), and 60.49b shall apply.
(9 VAC 5-80-110, 40 CFR 60.13, 60.48b, 60.49b and Condition VII.C.2.a of the 4/3/12 FESOP)
192. **CO CEMS** - Continuous emissions monitoring data from the No. 9 Power Boiler (PWR05) for CO shall be used as an indicator of compliance with the emission limit in Condition A.189. Minimum quality assurance of NSPS 40 CFR 60.13 shall apply. The same reporting requirements as specified for nitrogen oxides under NSPS 40 CFR 60.49b shall apply.
(9 VAC 5-80-110 and Condition VII.C.2.b of the 4/3/12 FESOP)

C. Recordkeeping and Reporting

193. **Recordkeeping** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Department. These records shall include, but are not limited to:
- a. Continuous monitoring system data, calibrations and calibration checks, percent operating time, and excess emissions;
 - b. Scheduled and unscheduled maintenance and operator training.
- These records shall be available at the facility for inspection by the Department and shall be current for the most recent 5 years.
(9 VAC 5-80-110 and Condition VII.C.3 of the 4/3/12 FESOP)
194. **Excess Emission Reports** - The permittee shall furnish written reports to the Department of excess emissions from the No. 9 Power Boiler (PWR05) monitored by a continuous monitoring system (CEMS) on a quarterly basis (or semi-annual basis if applicable see Regulations 9 VAC 5-50-50), postmarked no later than the 30th day following the end of the calendar quarter. These reports shall include, but are not limited to the following information:
- a. The magnitude of excess emissions, any conversion factors used in the calculation of excess emissions, the date and time of commencement and completion of each period of excess emissions and, the process operating time during the reporting period;
 - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the process, the nature and cause of the malfunction (if known), the corrective action taken or preventative measures adopted;
 - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and
 - d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in that report.
- (9 VAC 5-40-50C and 9 VAC 5-80-110)
195. **NSPS Report** - The permittee shall perform reporting and recordkeeping for the No. 9 Power Boiler (PWR05) in accordance with all the applicable requirements of 40 CFR Part 60, Subpart GG.
(9 VAC 5-80-110)

XI. Miscellaneous Process Areas

The emission units associated with this section of the permit are the following:

Unit ID	Emission Unit Description	Unit ID	Emission Unit Description
MIS01	Paved Roads	MIS13	Emergency Generator – Highground Stormwater Pump
MIS02	Unpaved roads	MIS14	Non-Emergency Backup Pump 4 LK Turning Gear
MIS03	Refrigeration systems	MIS15	WTP Fire Water Pump
MIS10	Miscellaneous Liquid Storage Tank	MIS16	Back Gate Fire Water Pump 2
MIS11	Emergency Generator - Main Gate	MIS17	FRP Fire Water Pump
MIS12	Emergency Generator – Main Office	MIS18	FRP-910 Fire Water Pump
		MIS19	Back Gate Fire Water Pump #1

A. Limitations

196. **NSPS Kb** - The Miscellaneous Liquid Storage Tank (MIS10) may be subject to 40 CFR 60, Subpart Kb if the VOC liquid stored in it has a maximum true vapor pressure ≥ 3.5 kPa. The permittee is authorized to store any liquid as long as the maximum true vapor pressure does not equal or exceed 3.5 kPa. If a VOC liquid with a maximum true vapor pressure ≥ 3.5 kPa will be stored, the permittee will notify the Department in writing within 10 days of material transfer into the tank and keep the necessary records to meet Subpart Kb. (9 VAC 5-80-110 and 9 VAC 5-50-410)
197. **NSPS IIII** - The Non-Emergency Backup Pump 4LK Turning Gear (MIS14) shall comply with the following:
- The emission standards in Table 1 of 40 CFR 60, Subpart IIII (60.4204(a)).

NMHC + NO _x	9.5 g/KW-hr or 7.1 g/HP-hr;
CO	6.6 g/KW-hr or 4.9 g/HP-hr;
PM	0.80 g/KW-hr or 0.60 g/HP-hr;
 - The fuel sulfur content shall not exceed 15 ppm;
 - Show compliance in accordance with 60.4211:
 - Maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
 - Change oil and filter every 1,000 hours of operation or annually, whichever comes first.
 - Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;
 - Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
 - Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

Note: All applicable requirements of 40 CFR Part 60, Subpart IIII **are not** specifically listed in this permit. The permittee should refer to the applicable regulation for additional requirements not included in this permit. (9 VAC 5-80-110 and 9 VAC 5-50-410)

198. **RICE MACT Requirements**- The emergency generators, firewater pumps, storm-water pump, and non-emergency backup pump shall be operated and maintained in accordance with the applicable requirements in 40 CFR 60 Subpart ZZZZ (RICE MACT). Engines defined as existing emergency CI engines rated at ≤ 500 HP shall be in compliance with 40 CFR Part 63, Subpart ZZZZ by May 3, 2013. These units shall comply with the applicable:
- a. Emission limitations as specified in 40 CFR 63.6602, Table 2c;
 - i. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.
 - ii. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;
 - iii. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
 - b. Monitoring, installation, collection, operation and maintenance requirements as specified in 40 CFR 63.6625(e), (f), (h), (i);
 - i. Develop a maintenance plan consistent with good air pollution control practice for minimizing emissions.
 - ii. If not already on the engine, install a non-resettable hour meter on each engine
 - iii. Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
 - c. Continuous compliance requirements as specified in 40 CFR 63.6605 and 63.6640;
 - d. Recordkeeping requirements as specified in 63.6655 (except 63.6655(c));
 - e. Reporting requirements as specified in the Footnote 1 of Table 2c; and
 - f. Requirements of the General Provisions listed in 40 CFR Subpart A, except per 63.6645(a)(5), the following do not apply: 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), and 63.9(b)-(e), (g) and (h).
- (9 VAC 5-80-110 and 40 CFR Part 63 Subpart ZZZZ)

B. Recordkeeping

199. **Recordkeeping** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Department. These records shall include, but are not limited to:
- a. The dimensions of the Miscellaneous Liquid Storage Tank (MISC10) and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the storage vessel.
 - b. Records demonstrating compliance with 40 CFR 63 Subpart ZZZZ for MIS11-MIS19.
 - c. Records demonstrating compliance with 40 CFR 60 Subpart IIII for MIS14.
- These records shall be available for inspection by the DEQ and shall be current for the most recent five years. (9 VAC 5-80-110E, 40 CFR Part 63 Subpart ZZZZ, and 40 CFR 60 Subpart IIII)

XII. Insignificant Emission Units

200. Insignificant Emission Units - The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720 B: Insignificant due to emission levels.

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
WDY03	Log unloading	9 VAC 5-80-720 B	PM-10	
WDY04	Log pile	9 VAC 5-80-720 B	PM-10	
WDY05	Log loading- log pile to slasher	9 VAC 5-80-720 B	PM-10	
WDY07	Short log transport- slasher/debarker/chipper	9 VAC 5-80-720 B	PM-10	
WDY09	Chip transport - chippers to pile	9 VAC 5-80-720 B	PM-10	
WDY10	Chip transport - purchased chips and saw dust to pile	9 VAC 5-80-720 B	PM-10	
WDY12	Chip piles	9 VAC 5-80-720 B	PM-10	
WDY13	Chip loading- trucks to chip pit	9 VAC 5-80-720 B	PM-10	
WDY15	Chip reclaiming - chip pile screening/rechipping	9 VAC 5-80-720 B	PM-10	
WDY17	Chip transport - screens to silos	9 VAC 5-80-720 B	PM-10	
WDY19	Chip transport - silos to digester	9 VAC 5-80-720 B	PM-10	
UPM18	#5 Low Density Storage Tank	9 VAC 5-80-720 B	PM-10	
UPM22	K1 Chip cyclone	9 VAC 5-80-720 B	PM-10	
UPM24	310 Chip conveyor	9 VAC 5-80-720 B	PM-10	
CRE14	Soap storage	9 VAC 5-80-720 B	TRS,VOC	
PRM12	Lube oil storage tank	9 VAC 5-80-720 B	VOC	
PWR09	Lube oil systems	9 VAC 5-80-720 B	VOC	
PWR13	Remote Wood Storage and Handling	9 VAC 5-80-720 B	PM-10	
WWT04	pH adjustment and TRS control	9 VAC 5-80-720 B	H ₂ S, TRS	0.92 x 10 ⁶ gpd
MIS05	Maintenance parts washer	9 VAC 5-80-720 B	VOC	
MIS06	Gasoline storage tank	9 VAC 5-80-720 B	VOC	
MIS07	Log Storage Yard	9 VAC 5-80-720 B	PM-10	
MIS20	Diesel Fuel Storage tank	9 VAC 5-80-720 B	VOC	

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, monitoring, recordkeeping and reporting shall not be required for these emission units in accordance with 9 VAC 5-80-110.

XIII. Permit Shield & Inapplicable Requirements

201. **Permit Shield & Inapplicable Requirements** - Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Non Applicability
9 VAC 5 Chapter 40 Article 15	Coal preparations	Mill does not perform any of the applicable coal prep activities
9 VAC 5 Chapter 40 Article 31	Paper and Fabric Coating Application Systems	This facility is not in a VOC control area specified by this article.
9 VAC 5 Chapter 40 Article 40	Open Burning	The facility does not conduct open burning.
9 VAC 5 Chapter 40 Article 43	Municipal Solid Waste Landfills	The mill landfills do not qualify as municipal landfills.
9 VAC 5 Chapter 40 Article 47	Solvent Cleaning	This article only applies to Northern Virginia VOC control area.
9 VAC 5 Chapter 40 Article 51	Case-by-Case RACT Determinations	The facility is not in a control area specified by this article
9 VAC 5 Chapter 80 Article 3	Federal Operating Permits for Acid Rain Sources	Not an acid rain source
9 VAC 5 Chapter 140 Part II	NO _x Annual Trading Program	The facility does not produce electricity for sale.
9 VAC 5 Chapter 140 Part III	NO _x Ozone Season Trading Program	The facility does not produce electricity for sale.
9 VAC 5 Chapter 140 Part IV	SO ₂ Annual Trading Program	The facility does not produce electricity for sale.
40 CFR 60 Subpart D	Fossil-Fuel-Fired Steam Generators For Which Construction Is Commenced After August 17, 1971	No emission units at the facility applicable to this regulation
40 CFR 60 Subpart Da	Electric Utility Steam Generating Units For Which Construction Is Commenced After September 18, 1978	No emission units at the facility applicable to this regulation
40 CFR 60 Subpart Dc	Small Industrial-Commercial-Institutional Steam Generating Units	No emission units at the facility applicable to this regulation
40 CFR 60 Subpart E	Incinerators	The boilers and furnaces do not combust solid waste as defined by 40 CFR 60.51(b)

Citation	Title of Citation	Description of Non Applicability
40 CFR 60 Subpart K	Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, And Prior To May 19, 1978	There are no storage vessels on site applicable to this regulation
40 CFR 60 Subpart Ka	Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, And Prior To July 23, 1984	There are no storage vessels on site applicable to this regulation.
40 CFR 60 Subpart O	Sewage Treatment Plants	This facility does not meet definition of applicability.
40 CFR 60 Subpart HH	Lime Manufacturing Plants	This facility is not subject to this subpart because lime manufacturing associated with pulp and paper making operations is specifically exempted by 40 CFR 60.340(b).
40 CFR 60 Subpart KKKK	Stationary Combustion Turbines	PWR05 was constructed before the applicability date and is applicable to subpart GG.
40 CFR 60 Subpart Y	New Source Performance Standards for Coal Preparation Plants	Mill does not perform any of the applicable coal prep activities
40 CFR 61 Subpart E	Mercury	This facility does not dry wastewater treatment sludge by direct contact with combustion gases.
40 CFR 61 Subpart I	Radionuclide Emissions From Facilities Licensed By The Nuclear Regulatory Commission And Federal Facilities Not Covered By Subpart H.	All radionuclides at source are in sealed sources.
40 CFR 61 Subpart J	Equipment Leaks (Fugitive Emission Source) Of Benzene	Equipment at the mill is not in contact with material containing benzene greater than or equal to 10% by weight.
40 CFR 61 Subpart V	Equipment Leaks (Fugitive Emission Source	Equipment at the mill is not in contact with material containing benzene or vinyl chloride greater than or equal to 10% by weight.
40 CFR 63 Subpart Q	Industrial Process Cooling Towers	Facility does not use Chromium containing compounds in its cooling towers
40 CFR 63 Subpart T	Degreasing Organic Cleaners (Halogenated Solvent Cleaning)	Facility does not use any of the specified compounds in its solvent baths.
40 CFR 63 Subpart TT	Equipment Leaks - Control Level 1	No applicable MACT references this subpart.
40 CFR 63 Subpart UU	Equipment Leaks - Control Level 2	No applicable MACT references this subpart.
40 CFR 63 Subpart JJJJ	Paper and Other Web Coatings (paper, plastic, film, foil, etc.)	Coating materials are not applied to the mill's product

Citation	Title of Citation	Description of Non Applicability
40 CFR 63 Subpart YYYY	National Emission Standards for Stationary Combustion Turbines	This turbine is considered an existing unit and is specifically exempted in Section 63.6090(b)(4).
40 CFR 63 Subpart AAAAA	Lime Manufacturing	Facility is specifically exempted from this subpart by 40 CFR 63.7081(a).
40 CFR 63 Subpart GGGGGG	Primary Nonferrous Metals Area Sources - Zinc, Cadmium and Beryllium	Facility is not a primary metal production facility.
40 CFR 72	Permits Regulation	Applies only to affected units under the federal acid rain control permit program
40 CFR 73	Sulfur Dioxide Allowance Systems	Only applies to electric utility sources in the federal acid rain control program
40 CFR 74	Sulfur Dioxide Opt-Ins	Only applies to industrial sources that have chosen to become part of the federal acid rain program
40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	Only applies to sources in the federal acid rain control program

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
 (9 VAC 5-80-140)

XIV. General Conditions

202. **Federal Enforceability** -All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9VAC5-80-110 N)
203. **Permit Expiration**- This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9VAC5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
(9VAC5-80-80 B, C, and F, 9VAC5-80-110 D and 9VAC5-80-170 B)
204. **Permit Expiration**-The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
(9VAC5-80-80 B, C, and F, 9VAC5-80-110 D and 9VAC5-80-170 B)
205. **Permit Expiration**-If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9VAC5 Chapter 80, until the Board takes final action on the application under 9VAC5-80-150.
(9VAC5-80-80 B, C, and F, 9VAC5-80-110 D and 9VAC5-80-170 B)
206. **Permit Expiration**-No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9VAC5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9VAC5 Chapter 80.
(9VAC5-80-80 B, C, and F, 9VAC5-80-110 D and 9VAC5-80-170 B)
207. **Permit Expiration**-If an applicant submits a timely and complete application under section 9VAC5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9VAC5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
(9VAC5-80-80 B, C, and F, 9VAC5-80-110 D and 9VAC5-80-170 B)
208. **Permit Expiration**-The protection under subsections F 1 and F 5 (ii) of section 9VAC5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9VAC5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.
(9VAC5-80-80 B, C, and F, 9VAC5-80-110 D and 9VAC5-80-170 B)
209. **Recordkeeping and Reporting** - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
- a. The date, place as defined in the permit, and time of sampling or measurements.
 - b. The date(s) analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses.
 - f. The operating conditions existing at the time of sampling or measurement.
- (9VAC5-80-110 F)

210. **Recordkeeping and Reporting** - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9VAC5-80-110 F)
211. **Recordkeeping and Reporting** - The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:
- a. The time period included in the report. The time periods to be addressed are January 1 to June 30 (due September 1) and July 1 to December 31 (due March 1).
 - b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:
 - i. Exceedance of emissions limitations or operational restrictions;
 - ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,
 - iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.
 - c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”
- (9VAC5-80-110 F)
212. **Annual Compliance Certification** - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:
- a. The time period included in the certification. The time period to be addressed is January 1 to December 31.
 - b. The identification of each term or condition of the permit that is the basis of the certification.
 - c. The compliance status.
 - d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
 - e. Consistent with subsection 9VAC5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
 - f. Such other facts as the permit may require to determine the compliance status of the source.
 - g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3-APD-Permits@epa.gov

(9VAC5-80-110 K.5)

213. **Permit Deviation Reporting** - The permittee shall notify the Director, Tidewater Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9VAC5-40-50 C and 9VAC5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9VAC5-40-40 and 9VAC5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Condition 211 of this permit.
(9VAC5-80-110 F.2 and 9VAC5-80-250)
214. **Failure/Malfunction Reporting** - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Tidewater Regional Office by facsimile transmission, telephone or e-mail of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9VAC5-40-50 C and 9VAC5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9VAC5-40-40 and 9VAC5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Tidewater Regional Office.
(9VAC5-20-180 C)
215. **Failure/Malfunction Reporting** - The emission units that have continuous monitors subject to 9VAC5-40-50 C and 9VAC5-50-50 C are not subject to the 14 day written notification requirement.
(9VAC5-20-180 C, 9VAC5-40-50, and 9VAC5-50-50)
216. **Failure/Malfunction Reporting** - The emission units subject to the reporting and the procedure requirements of 9VAC5-40-50 C and the procedures of 9VAC5-50-50 C are listed below:
- a. PWR05 - Combustion Turbine
 - b. CAU03 - No. 4 Lime Kiln
 - c. CRE03 - No. 6 Recovery Furnace
- (9VAC5-20-180 C, 9VAC5-40-50, and 9VAC5-50-50)
217. **Failure/Malfunction Reporting** - Each owner required to install a continuous monitoring system (CMS) or monitoring device subject to 9VAC5-40-41 or 9VAC5-50-410 shall submit a written report of excess emissions (as defined in the applicable subpart in 9VAC5-50-410) and either a monitoring systems performance report or a summary report form, or both, to the board quarterly. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. All reports shall include the following information:
- a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9VAC5-40-41 B.6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;
 - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;
 - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

- d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

All malfunctions of emission units not subject to 9VAC5-40-50 C and 9VAC5-50-50 C require written reports within 14 days of the discovery of the malfunction. Emission units which are covered in the SSM Plan of 40 CFR Part 63, Subpart S or Subpart MM are not required to provide the written statement prescribed in this paragraph.

(9VAC5-20-180 C, 9VAC5-40-50, and 9VAC5-50-50)

218. **Severability** - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9VAC5-80-110 G.1)
219. **Duty to Comply** - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9VAC5-80-110 G.2)
220. **Need to Halt or Reduce Activity not a Defense** -It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9VAC5-80-110 G.3)
221. **Permit Modification** -A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9VAC5-80-50, 9VAC5-80-1100, 9VAC5-80-1605, or 9VAC5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9VAC5-80-190 and 9VAC5-80-260)
222. **Property Rights** - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9VAC5-80-110 G.5)
223. **Duty to Submit Information** - The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9VAC5-80-110 G.6)
224. **Duty to Submit Information** - Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9VAC5-80-80 G.
(9VAC5-80-110 K.1)
225. **Duty to Pay Permit Fees** - The owner of any source for which a permit under 9VAC5-80-50 through 9VAC5-80-300 was issued shall pay permit fees consistent with the requirements of 9VAC5-80-310 through 9VAC5-80-350 in addition to an annual permit maintenance fee consistent with the requirements of 9VAC5-80-2310 through 9VAC5-80-2350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. The amount of the annual permit maintenance fee shall be the largest applicable base permit maintenance fee amount from Table 8-11A in 9VAC5-80-2340, adjusted annually by the change in the Consumer Price Index.
(9VAC5-80-110 H, 9VAC5-80-340 C and 9VAC5-80-2340 B)

226. **Fugitive Dust Emission Standards** - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:
- Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
 - Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
 - Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;
 - Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
 - The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.
- (9VAC5-40-90 and 9VAC5-50-90)
227. **Startup, Shutdown, and Malfunction** - At all times, including periods of startup, shutdown, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. (9VAC5-50-20 E and 9VAC5-40-20 E)
228. **Alternative Operating Scenarios** - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9VAC5 Chapter 80, Article 1. (9VAC5-80-110 J)
229. **Inspection and Entry Requirements** - The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:
- Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
 - Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
 - Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
 - Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
- (9VAC5-80-110 K.2)

230. **Reopening For Cause** - The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9VAC5-80-80 F. The conditions for reopening a permit are as follows:
- The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
 - The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9VAC5-80-110 D.
(9VAC5-80-110 L)
231. **Permit Availability** - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9VAC5-80-150 E)
232. **Transfer of Permits** - No person shall transfer a permit from one location to another, unless authorized under 9VAC5-80-130, or from one piece of equipment to another.
(9VAC5-80-160)
233. **Transfer of Permits** - In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9VAC5-80-200.
(9VAC5-80-160)
234. **Transfer of Permits** - In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9VAC5-80-200.
(9VAC5-80-160)
235. **Malfunction as an Affirmative Defense** - A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of Condition 236 are met.
(9VAC5-80-250)
236. **Malfunction as an Affirmative Defense** - The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
- A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
 - The permitted facility was at the time being properly operated.
 - During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

- d. The permittee notified the Board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9VAC5-80-110 F.2.b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9VAC5-20-180 C.
(9VAC5-80-250)
237. **Malfunction as an Affirmative Defense** - In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
(9VAC5-80-250)
238. **Malfunction as an Affirmative Defense** - The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.
(9VAC5-80-250)
239. **Permit Revocation or Termination for Cause** - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9VAC5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9VAC5-80-190 C and 9VAC5-80-260)
240. **Duty to Supplement or Correct Application** - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9VAC5-80-80 E)
241. **Stratospheric Ozone Protection** - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A-F)
242. **Asbestos Requirements** - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9VAC5-60-70 and 9VAC5-80-110 A.1)
243. **Accidental Release Prevention** - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)
244. **Changes to Permits for Emissions Trading** - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9VAC5-80-110 I)

245. **Emissions Trading** - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

- a. All terms and conditions required under 9VAC5-80-110, except subsection N, shall be included to determine compliance.
- b. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
- c. The owner shall meet all applicable requirements including the requirements of 9VAC5-80-50 through 9VAC5-80-300.
(9VAC5-80-110 I)

XV. Clean Air Interstate Rule (CAIR) Permit

246. **CAIR** - The permittee shall comply with all applicable CAIR requirements (9 VAC 5-140 Part I and 40 CFR Part 96) as contained in the CAIR Permit.
(9 VAC 5-80-110, 9 VAC 5-140 Part I and 40 CFR Part 96)

XVI. State-Only Enforceable Requirements

247. **State-Only Enforceable Requirements** - The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9VAC5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.
- a. Odor - 9 VAC 5 Chapter 40, Article 2 and 9 VAC 5 Chapter 50, Article 2.
 - b. State toxics rule - 9 VAC 5 Chapter 60, Articles 4 and 5.
(9VAC5-80-110 N and 9VAC5-80-300)

XVII. Appendix A - HVLC Gas / Condensate Streams

A. Subpart S - HVLC Gas Collection

1. E Decker	UPM13
2. D Washer System	
a. D Seal (Filtrate) Tank	UPM06
b. D Washer	UPM06
c. D Decker Filtrate Tank	UPM06
d. D Accepts Tank	UPM06
3. F Bleach Line	
a. F Pre-O ₂ Blend Chest	BLP05
b. F Pre-O ₂ Pressate Tank	BLP05
c. F O ₂ -1 Pressate Tank	BLP05
d. F O ₂ -2 Pressate Tank	BLP05
e. F O ₂ Blow Tank	BLP05
f. F Pre O ₂ , O ₂ -1 and O ₂ -2 Presses	BLP05
g. F Interstage Chest	BLP05
h. O ₂ Reactor	BLP05
4. No. 41 High Density Tank	BLP06
5. Vertical Foam Tank	UPM21

B. Subpart S - HVLC Condensate Collection

1. F O ₂ / D Wash Condensate Tank	CRE22
2. BLOX Condensate Tank	CRE22
3. RB6 Condensate Tank	CRE22

XVIII. Appendix B - Subpart S LVHC Gas / Condensate Streams

A. Subpart S – LVHC Gas Collection

1. Digester Systems
 - a. K1 Continuous Digester System ID: UPM02
 - b. Kamyr Chip Bin for K1 ID: UPM19
 - c. Pulping Process Condensate Collection Tank (BOD Tank) ID: UPM30
2. Turpentine Recovery System
 - a. Decanter Underflow Tank ID: UPM20
 - b. Decanter ID: UPM20
 - c. No.1 & 2 Storage tanks ID: UPM20
 - d. Padding Water Collection Tank ID: UPM20
3. Evaporator System
 - a. E Set Evaporator & Hotwell ID: CRE08
 - b. F Set Evaporator & Hotwell ID: CRE09
 - c. G Set Evaporator & Condensate Tank ID: CRE10
 - d. Condensate (Steam) Stripper and Feed Tank ID: CRE16
4. LVHC Collection System Drains
 - a. Foul Condensate Tank #1 ID: CRE18
 - b. Foul Condensate Tank #2 ID: CRE18
5. Condensate (steam) Stripper Off Gas System Drains
 - a. No. 1 Gas Line Drain Pot ID: CRE19
 - b. No. 2 Gas Line Drain Pot ID: CRE19
 - c. Low Pressure TRS Gas Lin Drain Pot ID: CRE19

B. Subpart S – LVHC Condensate Collection System (condensate drains)

1. Digester System
 - a. Kamyr Condensers from K1 Digester ID: UPM02
 - b. Kamyr Chip Bin Separator Condenser ID: UPM19
2. Turpentine Recovery System
 - a. Decanter Underflow ID: UPM20
3. Evaporator System
 - a. E-Set Evaporator Hotwell ID: CRE08
 - b. F-Set Evaporator Hotwell ID: CRE09
 - c. G Set Foul Condensate Tank ID: CRE10
4. LVHC Collection System Condensate Drains
 - a. Foul Condensate Tank #1 ID: CRE18
 - b. Foul Condensate Tank #2 ID: CRE18
5. Condensate (steam) Stripper Off Gas System Drains
 - a. No. 1 Gas Line Drain Pot ID: CRE19
 - b. No. 2 Gas Line Drain Pot ID: CRE19
 - c. Low Pressure TRS Gas Line Drain Pot ID: CRE19



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY TIDEWATER REGIONAL OFFICE

David K. Paylor
Director

Molly Joseph Ward
Secretary of Natural Resources

5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

Maria R. Nold
Regional Director

Federal Operating Permit Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, and Chapter 140 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9VAC5-80-50 through 9VAC5-80-300, and 9VAC5-140-10 through 9VAC5-140-900 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	International Paper - Franklin Mill
Facility Name:	International Paper - Franklin Mill
Facility Location:	34040 Union Camp Drive Franklin, Virginia 23851
Permit Number:	TRO-60214
AFS Number:	51-093-00006

This permit includes the following programs:

Federally Enforceable Requirements - Clean Air Act (Pages 4 through 72)

Federally Enforceable Requirements - CAIR (Page 73)

State Only Enforceable Requirements - (Page 73)

January 22, 2015

Effective Date

Maria R. Nold
Maria R. Nold

December 31, 2018

Expiration Date

January 22, 2015
Signature Date

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